

CONTAINS NO CBI



99 JUL 18 AM 10:18

OTS REPORTING OFFICE

Form Approved
OMB No. 2010-0019
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EPA-OTS



000622900J

90-890000556

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Comprehensive Assessment Information Rule
REPORTING FORM

When completed, send this form to:

Document Processing Center
Office of Toxic Substances, TS-790
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Attention: CAIR Reporting Office

For Agency Use Only:

Date of Receipt: _____

Document
Control Number: _____

Docket Number: _____

SECTION 1 GENERAL MANUFACTURER, IMPORTER, AND PROCESSOR INFORMATION

PART A GENERAL REPORTING INFORMATION

1.01 This Comprehensive Assessment Information Rule (CAIR) Reporting Form has been completed in response to the Federal Register Notice of..... 12 22 88
CBI mo. day year

☐ a. If a Chemical Abstracts Service Number (CAS No.) is provided in the Federal Register, list the CAS No. 026471]-62]-5

N/A b. If a chemical substance CAS No. is not provided in the Federal Register, list either (i) the chemical name, (ii) the mixture name, or (iii) the trade name of the chemical substance as provided in the Federal Register.

(i) Chemical name as listed in the rule

(ii) Name of mixture as listed in the rule

(iii) Trade name as listed in the rule

N/A c. If a chemical category is provided in the Federal Register, report the name of the category as listed in the rule, the chemical substance CAS No. you are reporting on which falls under the listed category, and the chemical name of the substance you are reporting on which falls under the listed category.

Name of category as listed in the rule

CAS No. of chemical substance]-]-

Name of chemical substance

1.02 Identify your reporting status under CAIR by circling the appropriate response(s).

CBI Manufacturer 1

☐ Importer 2

Processor 3

X/P manufacturer reporting for customer who is a processor 4

X/P processor reporting for customer who is a processor 5

☐ Mark (X) this box if you attach a continuation sheet.

1.03 Does the substance you are reporting on have an "x/p" designation associated with it in the above-listed Federal Register Notice?

CBI

Yes ☒ Go to question 1.04

☐

No ☐ Go to question 1.05

1.04 a. Do you manufacture, import, or process the listed substance and distribute it under a trade name(s) different than that listed in the Federal Register Notice? Circle the appropriate response.

CBI

Yes 1

☐

No 2

b. Check the appropriate box below:

☐ You have chosen to notify your customers of their reporting obligations

Provide the trade name(s)

☐ You have chosen to report for your customers

☐ You have submitted the trade name(s) to EPA one day after the effective date of the rule in the Federal Register Notice under which you are reporting.

1.05 If you buy a trade name product and are reporting because you were notified of your reporting requirements by your trade name supplier, provide that trade name.

CBI

Trade name N/A

☐

Is the trade name product a mixture? Circle the appropriate response.

Yes 1

No 2

1.06 Certification -- The person who is responsible for the completion of this form must sign the certification statement below:

CBI

☐ "I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate."

David Morgan
NAME

David H. Morgan
SIGNATURE

7/6/89
DATE SIGNED

Plant Manager
TITLE

(215) 258 - 5450
TELEPHONE NO.

☐ Mark (X) this box if you attach a continuation sheet.

1.07 Exemptions From Reporting -- If you have provided EPA or another Federal agency with the required information on a CAIR Reporting Form for the listed substance within the past 3 years, and this information is current, accurate, and complete for the time period specified in the rule, then sign the certification below. You CBI ☐ are required to complete section 1 of this CAIR form and provide any information now required but not previously submitted. Provide a copy of any previous submissions along with your Section 1 submission.

"I hereby certify that, to the best of my knowledge and belief, all required information which I have not included in this CAIR Reporting Form has been submitted to EPA within the past 3 years and is current, accurate, and complete for the time period specified in the rule."

N/A _____
NAME SIGNATURE DATE SIGNED

TITLE () TELEPHONE NO. DATE OF PREVIOUS SUBMISSION

1.08 CBI Certification -- If you have asserted any CBI claims in this report you must certify that the following statements truthfully and accurately apply to all of those confidentiality claims which you have asserted.

CBI ☐ "My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures; the information is not, and has not been, reasonably ascertainable by other persons (other than government bodies) by using legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding) without my company's consent; the information is not publicly available elsewhere; and disclosure of the information would cause substantial harm to my company's competitive position."

N/A _____
NAME SIGNATURE DATE SIGNED

TITLE () TELEPHONE NO.

☐ Mark (X) this box if you attach a continuation sheet.

1.09 Facility Identification

PA 18042--()
State Zip

Other SIC Code() () () ()

PA 18042--
State Zip

[illegible]

6

1.11 Parent Company Identification

CBI Name [E][A][S][T][O][N][] [F][O][A][M][] [C][O][R][P][O][R][A][T][I][O][N][] [] []
[] Address [5][0][] [H][I][L][T][O][N][] [S][T][R][E][E][T][] [] [] [] [] [] [] [] []
Street
[E][A][S][T][O][N][] [] [] [] [] [] [] [] [] [] [] [] [] [] [] []
City
[P][A][] [1][8][0][4][2]--[] [] [] []
State Zip
Dun & Bradstreet Number [] [] - [] [] - [] [] [] []

1.12 Technical Contact

CBI Name [P][A][U][L][] [W][] [B][A][U][G][H][M][A][N][] [] [] [] [] [] [] [] []
[] Title [P][R][O][D][U][C][T][I][O][N][] [M][A][N][A][G][E][R][] [] [] [] [] [] [] [] []
Address [5][0][] [H][I][L][T][O][N][] [S][T][R][E][E][T][] [] [] [] [] [] [] [] []
Street
[E][A][S][T][O][N][] [] [] [] [] [] [] [] [] [] [] [] [] [] [] []
City
[P][A][] [1][8][0][4][2]--[] [] [] []
State Zip
Telephone Number [2][1][5] - [2][5][8] - [5][4][5][0]

1.13 This reporting year is from [0][6] [8][8] to [0][5] [8][9]
Mo. Year Mo. Year

[] Mark (X) this box if you attach a continuation sheet.

1.16 For each classification listed below, state the quantity of the listed substance that was manufactured, imported, or processed at your facility during the reporting year.

CBI

☐

Classification

Quantity (kg/yr)

Manufactured _____

Imported _____

Processed (include quantity repackaged) 1,676,703

Of that quantity manufactured or imported, report that quantity:

In storage at the beginning of the reporting year _____

For on-site use or processing _____

For direct commercial distribution (including export) _____

In storage at the end of the reporting year _____

Of that quantity processed, report that quantity:

In storage at the beginning of the reporting year 163,266

Processed as a reactant (chemical producer) 8,323,747

Processed as a formulation component (mixture producer) _____

Processed as an article component (article producer) _____

Repackaged (including export) _____

In storage at the end of the reporting year 6203

☐ Mark (X) this box if you attach a continuation sheet.

PART C IDENTIFICATION OF MIXTURES

1.17 Mixture -- If the listed substance on which you are required to report is a mixture or a component of a mixture, provide the following information for each component chemical. (If the mixture composition is variable, report an average percentage of each component chemical for all formulations.)

CBI

[]

[illegible]

☐ Mark (X) this box if you attach a continuation sheet.

2.04 State the quantity of the listed substance that your facility manufactured, imported, or processed during the 3 corporate fiscal years preceding the reporting year in descending order.

CBI

☐ Year ending [0]5 [8]8
Mo. Year

Quantity manufactured kg

Quantity imported kg

Quantity processed 1,605,048 kg

Year ending [0]5 [8]7
Mo. Year

Quantity manufactured kg

Quantity imported kg

Quantity processed 1,294,982 kg

Year ending [0]5 [8]6
Mo. Year

Quantity manufactured kg

Quantity imported kg

Quantity processed 1,139,584 kg

2.05 Specify the manner in which you manufactured the listed substance. Circle all appropriate process types.

CBI

N/A

☐ Continuous process 1

Semicontinuous process 2

Batch process 3

☐ Mark (X) this box if you attach a continuation sheet.

2.06 Specify the manner in which you processed the listed substance. Circle all appropriate process types.

- ☐ Continuous process 1
- ☐ Semicontinuous process 2
- ☐ Batch process 3

2.07 State your facility's name-plate capacity for manufacturing or processing the listed substance. (If you are a batch manufacturer or batch processor, do not answer this question.)

- ☐ Manufacturing capacity kg/yr
- ☐ Processing capacity "UK" kg/yr

2.08 If you intend to increase or decrease the quantity of the listed substance manufactured, imported, or processed at any time after your current corporate fiscal year, estimate the increase or decrease based upon the reporting year's production volume.

<input type="checkbox"/>	Manufacturing Quantity (kg)	Importing Quantity (kg)	Processing Quantity (kg)
Amount of increase			N/A
Amount of decrease			N/A

☐ Mark (X) this box if you attach a continuation sheet.

2.09 For the three largest volume manufacturing or processing process types involving the listed substance, specify the number of days you manufactured or processed the listed substance during the reporting year. Also specify the average number of hours per day each process type was operated. (If only one or two operations are involved, list those.)

CBI

☐

Days/Year Average
Hours/Day

Process Type #1 (The process type involving the largest quantity of the listed substance.)

Manufactured	_____	_____
Processed	243	1.25

Process Type #2 (The process type involving the 2nd largest quantity of the listed substance.)

Manufactured	_____	_____
Processed	_____	_____

Process Type #3 (The process type involving the 3rd largest quantity of the listed substance.)

Manufactured	_____	_____
Processed	_____	_____

2.10 State the maximum daily inventory and average monthly inventory of the listed substance that was stored on-site during the reporting year in the form of a bulk chemical.

CBI

☐

N/A

Maximum daily inventory	_____	kg
Average monthly inventory	_____	kg

☐ Mark (X) this box if you attach a continuation sheet.

2.11 Related Product Types -- List any byproducts, coproducts, or impurities present with the listed substance in concentrations greater than 0.1 percent as it is manufactured, imported, or processed. The source of byproducts, coproducts, or impurities means the source from which the byproducts, coproducts, or impurities are made or introduced into the product (e.g., carryover from raw material, reaction product, etc.).

CBI
☐

N/A		Byproduct, Coproduct or Impurity ¹	Concentration (%) (specify \pm % precision)	Source of By- products, Co- products, or Impurities
<u>CAS No.</u>	<u>Chemical Name</u>			
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

¹Use the following codes to designate byproduct, coproduct, or impurity:

B = Byproduct
 C = Coproduct
 I = Impurity

☐ Mark (X) this box if you attach a continuation sheet.

- 2.12 Existing Product Types -- List all existing product types which you manufactured, imported, or processed using the listed substance during the reporting year. List the quantity of listed substance you use for each product type as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

☐

a. Product Types ¹	b. % of Quantity Manufactured, Imported, or Processed	c. % of Quantity Used Captively On-Site	d. Type of End-Users ²
B	100 %	100 %	I CS

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/ Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

- 2.13 Expected Product Types -- Identify all product types which you expect to manufacture, import, or process using the listed substance at any time after your current corporate fiscal year. For each use, specify the quantity you expect to manufacture, import, or process for each use as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

☐

a.	b.	c.	d.
Product Types ¹	% of Quantity Manufactured, Imported, or Processed	% of Quantity Used Captively On-Site	Type of End-Users ²
B	100 %	100 %	I CS

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/ Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

2.14 Final Product -- Complete the following table for each type of final product manufactured, imported, or processed at your facility that contains the listed substance other than as an impurity.

☐

a.	b.	c.	d.
Product Type ¹	Final Product's Physical Form ²	Average % Composition of Listed Substance in Final Product	Type of End-Users ³
N/A			

¹Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/ Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

²Use the following codes to designate the final product's physical form:

A = Gas	F2 = Crystalline solid
B = Liquid	F3 = Granules
C = Aqueous solution	F4 = Other solid
D = Paste	G = Gel
E = Slurry	H = Other (specify) _____
F1 = Powder	

³Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

2.15 Circle all applicable modes of transportation used to deliver bulk shipments of the
CBI listed substance to off-site customers.

☐ Truck 1
N/A Railcar 2
Barge, Vessel 3
Pipeline 4
Plane 5
Other (specify) 6

2.16 Customer Use -- Estimate the quantity of the listed substance used by your customers
CBI or prepared by your customers during the reporting year for use under each category
of end use listed (i-iv).

☐
N/A Category of End Use

i. Industrial Products

Chemical or mixture kg/yr
Article kg/yr

ii. Commercial Products

Chemical or mixture kg/yr
Article kg/yr

iii. Consumer Products

Chemical or mixture kg/yr
Article kg/yr

iv. Other

Distribution (excluding export) kg/yr
Export kg/yr
Quantity of substance consumed as reactant kg/yr
Unknown customer uses kg/yr

☐ Mark (X) this box if you attach a continuation sheet.

2.17 CBI State the quantity of the listed substance that you exported during the reporting year.

☐ In bulk 0 kg/yr
As a mixture 0 kg/yr
In articles 0 kg/yr

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 3 PROCESSOR RAW MATERIAL IDENTIFICATION

PART A GENERAL DATA

3.01 Specify the quantity purchased and the average price paid for the listed substance for each major source of supply listed. Product trades are treated as purchases.
CBI The average price is the market value of the product that was traded for the listed substance.

☐

<u>Source of Supply</u>	<u>Quantity (kg)</u>	<u>Average Price (\$/kg)</u>
The listed substance was manufactured on-site.		
The listed substance was transferred from a different company site.		
The listed substance was purchased directly from a manufacturer or importer.	8,152,172	.44
The listed substance was purchased from a distributor or repackager.		
The listed substance was purchased from a mixture producer.		

3.02 Circle all applicable modes of transportation used to deliver the listed substance to your facility.

☐

Truck	1
Railcar	2
Barge, Vessel	3
Pipeline	4
Plane	5
Other (specify) _____	6

☐ Mark (X) this box if you attach a continuation sheet.

3.03 a. Circle all applicable containers used to transport the listed substance to your
CBI facility.

☐

Bags 1
Boxes 2
Free standing tank cylinders 3
Tank rail cars 4
Hopper cars 5
Tank trucks 6
Hopper trucks 7
Drums 8
Pipeline 9
Other (specify) 10

b. If the listed substance is transported in pressurized tank cylinders, tank rail cars, or tank trucks, state the pressure of the tanks.

Tank cylinders mmHg
Tank rail cars mmHg
Tank trucks 568.86 mmHg

☐ Mark (X) this box if you attach a continuation sheet.

PART B RAW MATERIAL IN THE FORM OF A MIXTURE

3.04 If you obtain the listed substance in the form of a mixture, list the trade name(s) of the mixture, the name of its supplier(s) or manufacturer(s), an estimate of the average percent composition by weight of the listed substance in the mixture, and the amount of mixture processed during the reporting year.

CBI

☐

<u>Trade Name</u>	<u>Supplier or Manufacturer</u>	<u>Average % Composition by Weight (specify \pm % precision)</u>	<u>Amount Processed (kg/yr)</u>
N/A			

☐ Mark (X) this box if you attach a continuation sheet.

PART C RAW MATERIAL VOLUME

3.05 State the quantity of the listed substance used as a raw material during the
CBI reporting year in the form of a class I chemical, class II chemical, or polymer, and
the percent composition, by weight, of the listed substance.

☐

	Quantity Used (kg/yr)	% Composition by Weight of Listed Sub- stance in Raw Material (specify \pm % precision)
Class I chemical	8,323,747	100 %
Class II chemical		
Polymer		

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 4 PHYSICAL/CHEMICAL PROPERTIES

General Instructions:

If you are reporting on a mixture as defined in the glossary, reply to questions in Section 4 that are inappropriate to mixtures by stating "NA -- mixture."

For questions 4.06-4.15, if you possess any hazard warning statement, label, MSDS, or other notice that addresses the information requested, you may submit a copy or reasonable facsimile in lieu of answering those questions which it addresses.

PART A PHYSICAL/CHEMICAL DATA SUMMARY

- 4.01 Specify the percent purity for the three major¹ technical grade(s) of the listed substance as it is manufactured, imported, or processed. Measure the purity of the substance in the final product form for manufacturing activities, at the time you import the substance, or at the point you begin to process the substance.

CBI

☐

	<u>Manufacture</u>	<u>Import</u>	<u>Process</u>
Technical grade #1	_____ % purity	_____ % purity	100 _____ % purity
Technical grade #2	_____ % purity	_____ % purity	_____ % purity
Technical grade #3	_____ % purity	_____ % purity	_____ % purity

¹Major = Greatest quantity of listed substance manufactured, imported or processed.

- 4.02 Submit your most recently updated Material Safety Data Sheet (MSDS) for the listed substance, and for every formulation containing the listed substance. If you possess an MSDS that you developed and an MSDS developed by a different source, submit your version. Indicate whether at least one MSDS has been submitted by circling the appropriate response.

Yes 1

No 2

Indicate whether the MSDS was developed by your company or by a different source.

Your company 1

Another source 2

☒ Mark (X) this box if you attach a continuation sheet.

4.03 Submit a copy or reasonable facsimile of any hazard information (other than an MSDS) that is provided to your customers/users regarding the listed substance or any formulation containing the listed substance. Indicate whether this information has been submitted by circling the appropriate response.

Yes 1

No 2

4.04 For each activity that uses the listed substance, circle all the applicable number(s) corresponding to each physical state of the listed substance during the activity listed. Physical states for importing and processing activities are determined at the time you import or begin to process the listed substance. Physical states for manufacturing, storage, disposal and transport activities are determined using the final state of the product.

CBI

[]

Activity	Physical State				
	Solid	Slurry	Liquid	Liquified Gas	Gas
Manufacture	1	2	3	4	5
Import	1	2	3	4	5
Process	1	2	3	4	5
Store	1	2	3	4	5
Dispose	1	2	3	4	5
Transport	1	2	3	4	5

[] Mark (X) this box if you attach a continuation sheet.

4.05 Particle Size -- If the listed substance exists in particulate form during any of the following activities, indicate for each applicable physical state the size and the percentage distribution of the listed substance by activity. Do not include particles ≥ 10 microns in diameter. Measure the physical state and particle sizes for importing and processing activities at the time you import or begin to process the listed substance. Measure the physical state and particle sizes for manufacturing storage, disposal and transport activities using the final state of the product.

CBI

☐

<u>Physical State</u>	N/A	<u>Manufacture</u>	<u>Import</u>	<u>Process</u>	<u>Store</u>	<u>Dispose</u>	<u>Transport</u>
Dust	<1 micron	_____	_____	_____	_____	_____	_____
	1 to <5 microns	_____	_____	_____	_____	_____	_____
	5 to <10 microns	_____	_____	_____	_____	_____	_____
Powder	<1 micron	_____	_____	_____	_____	_____	_____
	1 to <5 microns	_____	_____	_____	_____	_____	_____
	5 to <10 microns	_____	_____	_____	_____	_____	_____
Fiber	<1 micron	_____	_____	_____	_____	_____	_____
	1 to <5 microns	_____	_____	_____	_____	_____	_____
	5 to <10 microns	_____	_____	_____	_____	_____	_____
Aerosol	<1 micron	_____	_____	_____	_____	_____	_____
	1 to <5 microns	_____	_____	_____	_____	_____	_____
	5 to <10 microns	_____	_____	_____	_____	_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 5 ENVIRONMENTAL FATE

PART A RATE CONSTANTS AND TRANSFORMATION PRODUCTS

5.01 Indicate the rate constants for the following transformation processes.

N/A a. Photolysis:

Absorption spectrum coefficient (peak) (1/M cm) at _____ nm
Reaction quantum yield, ϕ at _____ nm
Direct photolysis rate constant, k_p , at ... 1/hr _____ latitude

b. Oxidation constants at 25°C:

For 1O_2 (singlet oxygen), k_{ox} 1/M hr
For RO_2 (peroxy radical), k_{ox} 1/M hr

c. Five-day biochemical oxygen demand, BOD_5 ... mg/l

d. Biotransformation rate constant:

For bacterial transformation in water, k_b ... 1/hr
Specify culture

e. Hydrolysis rate constants:

For base-promoted process, k_B 1/M hr
For acid-promoted process, k_A 1/M hr
For neutral process, k_N 1/hr

f. Chemical reduction rate (specify conditions) _____

g. Other (such as spontaneous degradation) ... _____

☐ Mark (X) this box if you attach a continuation sheet.

PART B PARTITION COEFFICIENTS

5.02 a. Specify the half-life of the listed substance in the following media.

N/A

<u>Media</u>	<u>Half-life (specify units)</u>
Groundwater	_____
Atmosphere	_____
Surface water	_____
Soil	_____

b. Identify the listed substance's known transformation products that have a half-life greater than 24 hours.

<u>CAS No.</u>	<u>Name</u>	<u>Half-life (specify units)</u>	<u>Media</u>
_____	_____	_____	in _____
_____	_____	_____	in _____
_____	_____	_____	in _____
_____	_____	_____	in _____

5.03 Specify the octanol-water partition coefficient, K_{ow} ... _____ at 25°C

N/A Method of calculation or determination _____

5.04 Specify the soil-water partition coefficient, K_d _____ at 25°C

N/A Soil type _____

5.05 Specify the organic carbon-water partition

N/A coefficient, K_{oc} _____ at 25°C

5.06 Specify the Henry's Law Constant, H atm-m³/mole

N/A

☐ Mark (X) this box if you attach a continuation sheet.

5.07 List the bioconcentration factor (BCF) of the listed substance, the species for which it was determined, and the type of test used in deriving the BCF.

N/A	<u>Bioconcentration Factor</u>	<u>Species</u>	<u>Test</u> ¹
	<hr/>	<hr/>	<hr/>
	<hr/>	<hr/>	<hr/>
	<hr/>	<hr/>	<hr/>

¹Use the following codes to designate the type of test:

F = Flowthrough
S = Static

☐ Mark (X) this box if you attach a continuation sheet.

6.04 For each market listed below, state the quantity sold and the total sales value of
CBI the listed substance sold or transferred in bulk during the reporting year.

☐

<u>Market</u>	<u>Quantity Sold or Transferred (kg/yr)</u>	<u>Total Sales Value (\$/yr)</u>
Retail sales	_____	_____
Distribution -- Wholesalers	_____	_____
Distribution -- Retailers	_____	_____
Intra-company transfer	_____	_____
Repackagers	_____	_____
Mixture producers	_____	_____
Article producers	_____	_____
Other chemical manufacturers or processors	_____	_____
Exporters	_____	_____
Other (specify)	_____	_____
_____	_____	_____

6.05 Substitutes -- List all known commercially feasible substitutes that you know exist
for the listed substance and state the cost of each substitute. A commercially
CBI feasible substitute is one which is economically and technologically feasible to use
in your current operation, and which results in a final product with comparable
performance in its end uses.

☐

<u>Substitute</u>	<u>Cost (\$/kg)</u>
N/A	_____
_____	_____
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 7 MANUFACTURING AND PROCESSING INFORMATION

General Instructions:

For questions 7.04-7.06, provide a separate response for each process block flow diagram provided in questions 7.01, 7.02, and 7.03. Identify the process type from which the information is extracted.

PART A MANUFACTURING AND PROCESSING PROCESS TYPE DESCRIPTION

7.01 In accordance with the instructions, provide a process block flow diagram showing the major (greatest volume) process type involving the listed substance.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam MFG

☒ Mark (X) this box if you attach a continuation sheet.

7.03 In accordance with the instructions, provide a process block flow diagram showing all process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if not treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam MFG Process

☐ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Man. Process

<u>Unit Operation ID Number</u>	<u>Typical Equipment Type</u>	<u>Operating Temperature Range (°C)</u>	<u>Operating Pressure Range (mm Hg)</u>	<u>Vessel Composition</u>
<u>7.1</u>	<u>Bulk Poly Tank</u>	<u><16</u>	<u>Atmospheric</u>	<u>Carbon Steel</u>
<u>7.3</u>	<u>T.D.I. Pump</u>	<u><18</u>	<u>1040</u>	<u>Stainless</u>
<u>7.4</u>	<u>Poly Pump</u>	<u><16</u>	<u>3100</u>	<u>Iron</u>
<u>7.8</u>	<u>T.D.I. Vent</u>	<u>Ambient</u>	<u>Atmospheric</u>	<u>Steel</u>
<u>7.9</u>	<u>T.D.I. Process Tank</u>	<u><18</u>	<u>Atmospheric</u>	<u>Steel</u>
<u>7.10B</u>	<u>Polyol Tank</u>	<u><16</u>	<u>Atmospheric</u>	<u>Steel</u>
<u>7.10C</u>	<u>Tin Catalst Tank</u>	<u>Ambient</u>	<u>1020</u>	<u>Steel, Glass</u>
<u>7.10D</u>	<u>Armine Cat. Tank</u>	<u>Ambient</u>	<u>1020</u>	<u>Steel, Glass</u> <u>Lined</u>
<u>7.10E</u>	<u>Silicone Sur. Tank</u>	<u>Ambient</u>	<u>1020</u>	<u>Steel, Glass</u> <u>Lined</u>
<u>7.10F</u>	<u>Water Tank</u>	<u>Ambient</u>	<u>1020</u>	<u>Steel, Glass</u> <u>Lines</u>

☒ Mark (X) this box if you attach a continuation sheet.

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam MFG Process

<u>Process Stream ID Code</u>	<u>Process Stream Description</u>	<u>Physical State¹</u>	<u>Stream Flow (kg/yr)</u>
<u>7H, 7L, 7J, 7K</u>	<u>T.D.I</u>	<u>OL</u>	<u>1,711,992</u>
<u>7W, 7O, 7P, 7Q, 7R, 7S</u>	<u>Polyol</u>	<u>OL</u>	<u>2,674,988</u>
<u>7P, 7Q, 7R, 7S</u>	<u>Water</u>	<u>OL</u>	<u>106,999</u>
<u>7Z</u>	<u>Polyurethane Foam</u>	<u>SO</u>	<u>4,681,229</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

¹Use the following codes to designate the physical state for each process stream:

GC = Gas (condensable at ambient temperature and pressure)
 GU = Gas (uncondensable at ambient temperature and pressure)
 SO = Solid
 SY = Sludge or slurry
 AL = Aqueous liquid
 OL = Organic liquid
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☐ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type Flexible Slabstock Polyurethane Foam MFG. Process

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds ¹	Concentrations ^{2,3} (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7W</u>	<u>Poly</u>	<u>100 %</u>	<u>N/A</u>	<u>N/A</u>
<u>7H</u>	<u>T.D.I</u>	<u>99.9 %</u>	<u>Hydrolyzable Chloride</u>	<u>0.1 %</u>
<u>7T</u>	<u>Polyol, TDI</u>	<u>100 %</u>	<u>N/A</u>	<u>N/A</u>
	<u>Silicon Tin</u>			
	<u>Water Amine</u>			

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

7.06 (continued)

¹For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column b. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
<u>1</u>	<u>N/A</u>	
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		

²Use the following codes to designate how the concentration was determined:

A = Analytical result

E = Engineering judgement/calculation

³Use the following codes to designate how the concentration was measured:

V = Volume

W = Weight

☐ Mark (X) this box if you attach a continuation sheet.

PART A RESIDUAL TREATMENT PROCESS DESCRIPTION

8.01 In accordance with the instructions, provide a residual treatment block flow diagram which describes the treatment process used for residuals identified in question 7.01.
CBI

☐ Process type Flexible Polyurethane Foam Mfg. Process

☐ Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

☐ Process type Flexible Polyurethane Foam Mfg. Process

a.	b.	c.	d.	e.	f.	g.
Stream ID Code	Type of Hazardous Waste ¹	Physical State of Residual ²	Known Compounds ³	Concentrations (% or ppm) ^{4,5,6}	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7KK</u>	<u>N/A</u>	<u>Gu</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>7V</u>	<u>N/A</u>	<u>Gu</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>7Y</u>	<u>N/A</u>	<u>Gu</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>7BB</u>	<u>N/A</u>	<u>Gu</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

8.05 continued below

☒ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

¹Use the following codes to designate the type of hazardous waste:

I = Ignitable
C = Corrosive
R = Reactive
E = EP toxic
T = Toxic
H = Acutely hazardous

²Use the following codes to designate the physical state of the residual:

GC = Gas (condensable at ambient temperature and pressure)
GU = Gas (uncondensable at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

8.05 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

³For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column d. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
<u>1</u>	<u>N/A</u>	
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		

⁴Use the following codes to designate how the concentration was determined:

A = Analytical result
E = Engineering judgement/calculation

8.05 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

⁵Use the following codes to designate how the concentration was measured:

V = Volume

W = Weight

⁶Specify the analytical test methods used and their detection limits in the table below. Assign a code to each test method used and list those codes in column e.

<u>Code</u>	<u>Method</u>	<u>Detection Limit</u> <u>(± ug/l)</u>
<u>1</u>	<u>N/A</u>	<u></u>
<u>2</u>	<u></u>	<u></u>
<u>3</u>	<u></u>	<u></u>
<u>4</u>	<u></u>	<u></u>
<u>5</u>	<u></u>	<u></u>
<u>6</u>	<u></u>	<u></u>

☐ Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mgf. Process

a.	b.	c.	d.	e.		f.	g.
Stream ID Code	Waste Description Code ¹	Management Method Code ²	Residual Quantities (kg/yr)	Management of Residual (%)		Costs for Off-Site Management (per kg)	Changes in Management Methods
				On-Site	Off-Site		
7KK	B57	M-5	N/A	N/A			N/A
7V	B57	M-5	N/A	N/A			N/A
7Y	B57	M-5	N/A	N/A			N/A
7BB	B57	M-5	N/A	N/A			N/A

¹Use the codes provided in Exhibit 8-1 to designate the waste descriptions

²Use the codes provided in Exhibit 8-2 to designate the management methods

☒ Mark (X) this box if you attach a continuation sheet.

EXHIBIT 8-1.
(Refers to question 8.06(b))

WASTE DESCRIPTION CODES

These waste description codes were developed specifically for this survey to supplement the descriptions listed with the RCRA and other waste codes. (These waste description codes are not regulatory definitions.)

WASTE DESCRIPTION CODES FOR HAZARDOUS WASTE DESCRIBED BY A SINGLE RCRA F, K, P, OR U WASTE CODE

A01 Spent solvent (F001-F005, K086)	A06 Contaminated soil or cleanup residue	A10 Incinerator ash
A02 Other organic liquid (F001-F005, K086)	A07 Other F or K waste, exactly as described*	A11 Solidified treatment residue
A03 Still bottom (F001-F005, K086)	A08 Concentrated off-spec or discarded product	A12 Other treatment residue (specify in "Facility Notes")
A04 Other organic sludge (F001-F005, K086)	A09 Empty containers	A13 Other untreated waste (specify in "Facility Notes")
A05 Wastewater or aqueous mixture		

*"Exactly as described" means that the waste matches the description of the RCRA waste code.

INORGANIC LIQUIDS—Waste that is primarily inorganic and highly fluid (e.g., aqueous), with low suspended inorganic solids and low organic content.

- B01 Aqueous waste with low solvents
- B02 Aqueous waste with low other toxic organics
- B03 Spent acid with metals
- B04 Spent acid without metals
- B05 Acidic aqueous waste
- B06 Caustic solution with metals but no cyanides
- B07 Caustic solution with metals and cyanides
- B08 Caustic solution with cyanides but no metals
- B09 Spent caustic
- B10 Caustic aqueous waste
- B11 Aqueous waste with reactive sulfides
- B12 Aqueous waste with other reactives (e.g., explosives)
- B13 Other aqueous waste with high dissolved solids
- B14 Other aqueous waste with low dissolved solids
- B15 Scrubber water
- B16 Leachate
- B17 Waste liquid mercury
- B18 Other inorganic liquid (specify in "Facility Notes")

INORGANIC SLUDGES—Waste that is primarily inorganic, with moderate-to-high water content and low organic content; pumpable.

- B19 Lime sludge without metals
- B20 Lime sludge with metals/metal hydroxide sludge
- B21 Wastewater treatment sludge with toxic organics
- B22 Other wastewater treatment sludge
- B23 Untreated plating sludge without cyanides
- B24 Untreated plating sludge with cyanides
- B25 Other sludge with cyanides
- B26 Sludge with reactive sulfides
- B27 Sludge with other reactives
- B28 Degreasing sludge with metal scale or filings
- B29 Air pollution control device sludge (e.g., fly ash, wet scrubber sludge)
- B30 Sediment or lagoon dragout contaminated with organics
- B31 Sediment or lagoon dragout contaminated with inorganics only

- B32 Drilling mud
- B33 Asbestos slurry or sludge
- B34 Chloride or other brine sludge
- B35 Other inorganic sludge (specify in "Facility Notes")

INORGANIC SOLIDS—Waste that is primarily inorganic and solid, with low organic content and low-to-moderate water content; not pumpable.

- B36 Soil contaminated with organics
- B37 Soil contaminated with inorganics only
- B38 Ash, slag, or other residue from incineration of wastes
- B39 Other "dry" ash, slag, or thermal residue
- B40 "Dry" lime or metal hydroxide solids chemically "fixed"
- B41 "Dry" lime or metal hydroxide solids not "fixed"
- B42 Metal scale, filings, or scrap
- B43 Empty or crushed metal drums or containers
- B44 Batteries or battery parts, casings, cores
- B45 Spent solid filters or adsorbents
- B46 Asbestos solids and debris
- B47 Metal-cyanide salts/chemicals
- B48 Reactive cyanide salts/chemicals
- B49 Reactive sulfide salts/chemicals
- B50 Other reactive salts/chemicals
- B51 Other metal salts/chemicals
- B52 Other waste inorganic chemicals
- B53 Lab packs of old chemicals only
- B54 Lab packs of debris only
- B55 Mixed lab packs
- B56 Other inorganic solids (specify in "Facility Notes")

INORGANIC GASES—Waste that is primarily inorganic with a low organic content and is a gas at atmospheric pressure.

- B57 Inorganic gases

ORGANIC LIQUIDS—Waste that is primarily organic and is highly fluid, with low inorganic solids content and low-to-moderate water content.

- B58 Concentrated solvent-water solution
- B59 Halogenated (e.g., chlorinated) solvent
- B60 Nonhalogenated solvent

- B61 Halogenated/nonhalogenated solvent mixture
- B62 Oil-water emulsion or mixture
- B63 Waste oil
- B64 Concentrated aqueous solution of other organics
- B65 Concentrated phenolics
- B66 Organic paint, ink, lacquer, or varnish
- B67 Adhesives or epoxies
- B68 Paint thinner or petroleum distillates
- B69 Reactive or polymerizable organic liquid
- B70 Other organic liquid (specify in "Facility Notes")

ORGANIC SLUDGES—Waste that is primarily organic, with low-to-moderate inorganic solids content and water content; pumpable.

- B71 Still bottoms of halogenated (e.g., chlorinated) solvents or other organic liquids
- B72 Still bottoms of nonhalogenated solvents or other organic liquids
- B73 Oily sludge
- B74 Organic paint or ink sludge
- B75 Reactive or polymerizable organics
- B76 Resins, tars, or tarry sludge
- B77 Biological treatment sludge
- B78 Sewage or other untreated biological sludge
- B79 Other organic sludge (specify in "Facility Notes")

ORGANIC SOLIDS—Waste that is primarily organic and solid, with low-to-moderate inorganic content and water content; not pumpable.

- B80 Halogenated pesticide solid
- B81 Nonhalogenated pesticide solid
- B82 Solid resins or polymerized organics
- B83 Spent carbon
- B84 Reactive organic solid
- B85 Empty fiber or plastic containers
- B86 Lab packs of old chemicals only
- B87 Lab packs of debris only
- B88 Mixed lab packs
- B89 Other halogenated organic solid
- B90 Other nonhalogenated organic solid

ORGANIC GASES—Waste that is primarily organic with low-to-moderate inorganic content and is a gas at atmospheric pressure.

- B91 Organic gases

EXHIBIT 8-2.
(Refers to question 8.06(c))

MANAGEMENT METHODS

- M1 = Discharge to publicly owned wastewater treatment works
M2 = Discharge to surface water under NPDES
M3 = Discharge to off-site, privately owned wastewater treatment works
M4 = Scrubber: a) caustic; b) water; c) other
M5 = Vent to: a) atmosphere; b) flare; c) other (specify) _____
M6 = Other (specify) _____

TREATMENT AND RECYCLING

Incineration/thermal treatment

- 1I Liquid injection
2I Rotary or rocking kiln
3I Rotary kiln with a liquid injection unit
4I Two stage
5I Fixed hearth
6I Multiple hearth
7I Fluidized bed
8I Infrared
9I Fume/vapor
10I Pyrolytic destructor
11I Other incineration/thermal treatment

Reuse as fuel

- 1RF Cement kiln
2RF Aggregate kiln
3RF Asphalt kiln
4RF Other kiln
5RF Blast furnace
6RF Sulfur recovery furnace
7RF Smelting, melting, or refining furnace
8RF Coke oven
9RF Other industrial furnace
10RF Industrial boiler
11RF Utility boiler
12RF Process heater
13RF Other reuse as fuel unit

Fuel Blending

- 1FB Fuel blending

Solidification

- 1S Cement or cement/silicate processes
2S Pozzolan processes
3S Asphaltic processes
4S Thermoplastic techniques
5S Organic polymer techniques
6S Jacketing (macro-encapsulation)
7S Other solidification

Recovery of solvents and liquid organics for reuse

- 1SR Fractionation
2SR Batch still distillation
3SR Solvent extraction
4SR Thin-film evaporation
5SR Filtration
6SR Phase separation
7SR Dessication
8SR Other solvent recovery

Recovery of metals

- 1MR Activated carbon (for metals recovery)
2MR Electrodialysis (for metals recovery)
3MR Electrolytic metal recovery
4MR Ion exchange (for metals recovery)
5MR Reverse osmosis (for metals recovery)
6MR Solvent extraction (for metals recovery)
7MR Ultrafiltration (for metals recovery)
8MR Other metals recovery

Wastewater Treatment

After each wastewater treatment type listed below (1WT - 66WT) specify a) tank; or b) surface impoundment (i.e., 63WTa)

Equalization

- 1WT Equalization

Cyanide oxidation

- 2WT Alkaline chlorination
3WT Ozone
4WT Electrochemical
5WT Other cyanide oxidation

General oxidation (including disinfection)

- 6WT Chlorination
7WT Ozonation
8WT UV radiation
9WT Other general oxidation

Chemical precipitation¹

- 10WT Lime
11WT Sodium hydroxide
12WT Soda ash
13WT Sulfide
14WT Other chemical precipitation

Chromium reduction

- 15WT Sodium bisulfite
16WT Sulfur dioxide

EXHIBIT 8-2. (continued)

MANAGEMENT METHODS

17WT Ferrous sulfate
18WT Other chromium reduction

Complexed metals treatment (other than
chemical precipitation by pH adjustment)
19WT Complexed metals treatment

Emulsion breaking
20WT Thermal
21WT Chemical
22WT Other emulsion breaking

Adsorption
23WT Carbon adsorption
24WT Ion exchange
25WT Resin adsorption
26WT Other adsorption

Stripping
27WT Air stripping
28WT Steam stripping
29WT Other stripping

Evaporation
30WT Thermal
31WT Solar
32WT Vapor recompression
33WT Other evaporation

Filtration
34WT Diatomaceous earth
35WT Sand
36WT Multimedia
37WT Other filtration

Sludge dewatering
38WT Gravity thickening
39WT Vacuum filtration
40WT Pressure filtration (belt, plate
and frame, or leaf)
41WT Centrifuge
42WT Other sludge dewatering

Air flotation
43WT Dissolved air flotation
44WT Partial aeration
45WT Air dispersion
46WT Other air flotation

Oil skimming
47WT Gravity separation

48WT Coalescing plate separation
49WT Other oil skimming

Other liquid phase separation
50WT Decanting
51WT Other liquid phase separation

Biological treatment
52WT Activated sludge
53WT Fixed film-trickling filter
54WT Fixed film-rotating contactor
55WT Lagoon or basin, aerated
56WT Lagoon, facultative
57WT Anaerobic
58WT Other biological treatment

Other wastewater treatment
59WT Wet air oxidation
60WT Neutralization
61WT Nitrification
62WT Denitrification
63WT Flocculation and/or coagulation
64WT Settling (clarification)
65WT Reverse osmosis
66WT Other wastewater treatment

OTHER WASTE TREATMENT

1TR Other treatment
2TR Other recovery for reuse

ACCUMULATION

1A Containers
2A Tanks

STORAGE

1ST Container (i.e., barrel, drum)
2ST Tank
3ST Waste pile
4ST Surface impoundment
5ST Other storage

DISPOSAL

1D Landfill
2D Land treatment
3D Surface impoundment (to be closed
as a landfill)
4D Underground injection well

¹Chemical precipitation is a treatment operation whereby the pH of a waste is adjusted to the range necessary for removal (precipitation) of contaminants. However, if the pH is adjusted solely to achieve a neutral pH, THE OPERATION SHOULD BE CONSIDERED NEUTRALIZATION (60WT).

8.22 Describe the combustion chamber design parameters for each of the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

☐ N/A

Incinerator	Combustion Chamber Temperature (°C)		Location of Temperature Monitor		Residence Time In Combustion Chamber (seconds)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
1						
2						
3						

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1
No 2

8.23 Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

☐

Incinerator	Air Pollution Control Device ¹	Types of Emissions Data Available
1	N/A	
2		
3		

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1
No 2

¹Use the following codes to designate the air pollution control device:

S = Scrubber (include type of scrubber in parenthesis)
E = Electrostatic precipitator
O = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

PART A EMPLOYMENT AND POTENTIAL EXPOSURE PROFILE

9.01 Mark (X) the appropriate column to indicate whether your company maintains records on the following data elements for hourly and salaried workers. Specify for each data element the year in which you began maintaining records and the number of years the records for that data element are maintained. (Refer to the instructions for further explanation and an example.)

CBI

☐

Data Element	Data are Maintained for:		Year in Which Data Collection Began	Number of Years Records Are Maintained
	Hourly Workers	Salaried Workers		
Date of hire	<u>X</u>	<u>x</u>	<u>1983</u>	<u>6</u>
Age at hire	<u>X</u>	<u>X</u>	<u>1983</u>	<u>6</u>
Work history of individual before employment at your facility	<u>X</u>	<u>X</u>	<u>1983</u>	<u>6</u>
Sex	<u>X</u>	<u>X</u>	<u>1983</u>	<u>6</u>
Race	<u>X</u>		<u>1983</u>	<u>6</u>
Job titles	<u>X</u>	<u>X</u>	<u>1983</u>	<u>6</u>
Start date for each job title	<u>X</u>	<u>X</u>	<u>1983</u>	<u>6</u>
End date for each job title	<u>X</u>	<u>X</u>	<u>1983</u>	<u>6</u>
Work area industrial hygiene monitoring data	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Personal employee monitoring data	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Employee medical history	<u>X</u>	<u>XX</u>	<u>N/A</u>	<u>N/A</u>
Employee smoking history	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Accident history	<u>X</u>	<u>X</u>	<u>N/A</u>	<u>N/A</u>
Retirement date	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Termination date	<u>X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Vital status of retirees	<u>N/A</u>		<u>N/A</u>	<u>N/A</u>
Cause of death data	<u>N/A</u>		<u>N/A</u>	<u>N/A</u>

☐ Mark (X) this box if you attach a continuation sheet.

9.02 In accordance with the instructions, complete the following table for each activity in which you engage.

CBI

☐

a.	b.	c.	d.	e.
<u>Activity</u>	<u>Process Category</u>	<u>Yearly Quantity (kg)</u>	<u>Total Workers</u>	<u>Total Worker-Hours</u>
Manufacture of the listed substance	Enclosed	_____	_____	_____
	Controlled Release	_____	_____	_____
	Open	_____	_____	_____
On-site use as reactant	Enclosed	_____	_____	_____
	Controlled Release	_____	_____	_____
	Open	_____	_____	_____
On-site use as nonreactant	Enclosed	<u>1,711,992</u>	<u>173</u>	<u>3949</u>
	Controlled Release	_____	_____	_____
	Open	_____	_____	_____
On-site preparation of products	Enclosed	_____	_____	_____
	Controlled Release	_____	_____	_____
	Open	_____	_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

9.03 Provide a descriptive job title for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance.

CBI

☐

Labor Category

Descriptive Job Title

A	<u>*Receive chemicals, set up line, Pos</u> <u>Production Lead Man:control board, operates control brd.</u>
B	<u>Production Worker: Assists lead man, operates plastic sy</u>
C	<u>W.H. Supervisor:Direct bun handling system, direct safet</u> <u>of clean.</u>
D	<u>Bun Runners: Remove foam from production line, place in</u> <u>curing position.</u>
E	<u>Q.C. Tech: Monitor foam quality & cutting consistency</u> <u>during pour.</u>
F	<u>Production Manager: Direct receiving of chemicals,</u> <u>formulates foam grades, direct production crew, direct</u>
G	<u>safety of crew.</u>
H	<u>_____</u>
I	<u>_____</u>
J	<u>_____</u>

☐ Mark (X) this box if you attach a continuation sheet.

9.04 In accordance with the instructions, provide your process block flow diagram(s) and indicate associated work areas.

CBI

☐ Process type Flexible Slabstock Polyurethane Faom Mfg. Process

☒ Mark (X) this box if you attach a continuation sheet.

9.05 Describe the various work area(s) shown in question 9.04 that encompass workers who may potentially come in contact with or be exposed to the listed substance. Add any additional areas not shown in the process block flow diagram in question 7.01 or 7.02. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process

Work Area ID

Description of Work Areas and Worker Activities

X 3	Bun handling	Remove slabstock from prod. line
X 4	Foam storage	Place buns for shipment
X 5	Foam converting	Cut to size
X 9	General Office	Administrative
X 7	Lunch room	Lunch
X 6	Q.C. Lab	Testing
X 10	Accounting office	Financial
X 11	Sales office	Sales
X 12	Maint. Shop	Repair equipment
X 19		

☒ Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process.

Work area

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance ¹	Average Length of Exposure Per Day ²	Number of Days per Year Exposed
<u>A</u>	<u>1</u>	<u>Direct Skin</u>	<u>OL</u>	<u>B</u>	<u>98</u>
<u>B</u>	<u>3</u>	<u>Direct Skin</u>	<u>OL</u>	<u>B</u>	<u>98</u>
<u>F</u>	<u>1</u>	<u>Direct Skin</u>	<u>OL</u>	<u>B</u>	<u>98</u>
<u>A</u>	<u>1</u>	<u>Inhalation</u>	<u>GU</u>	<u>C</u>	<u>243</u>
<u>B</u>	<u>3</u>	<u>Inhalation</u>	<u>GU</u>	<u>C</u>	<u>243</u>
<u>C</u>	<u>3</u>	<u>Inhalation</u>	<u>GU</u>	<u>C</u>	<u>243</u>
<u>D</u>	<u>6</u>	<u>Inhalation</u>	<u>GU</u>	<u>C</u>	<u>243</u>
<u>E</u>	<u>1</u>	<u>Inhalation</u>	<u>GU</u>	<u>C</u>	<u>243</u>
<u>F</u>	<u>1</u>	<u>Inhalation</u>	<u>GU</u>	<u>C</u>	<u>243</u>

¹Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensable at ambient temperature and pressure)
 GU = Gas (uncondensable at ambient temperature and pressure; includes fumes, vapors, etc.)
 SO = Solid

SY = Sludge or slurry
 AL = Aqueous liquid
 OL = Organic liquid
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

²Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
 B = Greater than 15 minutes, but not exceeding 1 hour
 C = Greater than one hour, but not exceeding 2 hours

D = Greater than 2 hours, but not exceeding 4 hours
 E = Greater than 4 hours, but not exceeding 8 hours
 F = Greater than 8 hours

☐ Mark (X) this box if you attach a continuation sheet.

9.07 For each labor category represented in question 9.06, indicate the 8-hour Time Weighted Average (TWA) exposure levels and the 15-minute peak exposure levels. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type FLexible Slabstock Polyurethane Foam Mfg. Process

Work area

<u>Labor Category</u>	<u>8-hour TWA Exposure Level (ppm, mg/m³, other-specify)</u>	<u>15-Minute Peak Exposure Level (ppm, mg/m³, other-specify)</u>
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____
_____	_____ <u>N/A</u> _____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART B WORK PLACE MONITORING PROGRAM

9.08 If you monitor worker exposure to the listed substance, complete the following table.

CBI

☐

N/A

<u>Sample/Test</u>	<u>Work Area ID</u>	<u>Testing Frequency (per year)</u>	<u>Number of Samples (per test)</u>	<u>Who Samples¹</u>	<u>Analyzed In-House (Y/N)</u>	<u>Number of Years Records Maintained</u>
Personal breathing zone	_____	_____	_____	_____	_____	_____
General work area (air)	_____	_____	_____	_____	_____	_____
Wipe samples	_____	_____	_____	_____	_____	_____
Adhesive patches	_____	_____	_____	_____	_____	_____
Blood samples	_____	_____	_____	_____	_____	_____
Urine samples	_____	_____	_____	_____	_____	_____
Respiratory samples	_____	_____	_____	_____	_____	_____
Allergy tests	_____	_____	_____	_____	_____	_____
Other (specify)	_____	_____	_____	_____	_____	_____
Other (specify)	_____	_____	_____	_____	_____	_____
Other (specify)	_____	_____	_____	_____	_____	_____

¹Use the following codes to designate who takes the monitoring samples:

A = Plant industrial hygienist

B = Insurance carrier

C = OSHA consultant

D = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

9.09 For each sample type identified in question 9.08, describe the type of sampling and analytical methodology used for each type of sample.

<input type="checkbox"/>	<u>Sample Type</u>	<u>Sampling and Analytical Methodology</u>
	N/A	

9.10 If you conduct personal and/or ambient air monitoring for the listed substance, specify the following information for each equipment type used.

<input type="checkbox"/>	<u>Equipment Type</u> ¹	<u>Detection Limit</u> ²	<u>Manufacturer</u>	<u>Averaging Time (hr)</u>	<u>Model Number</u>
	N/A				

¹Use the following codes to designate personal air monitoring equipment types:

- A = Passive dosimeter
- B = Detector tube
- C = Charcoal filtration tube with pump
- D = Other (specify) _____

Use the following codes to designate ambient air monitoring equipment types:

- E = Stationary monitors located within work area
- F = Stationary monitors located within facility
- G = Stationary monitors located at plant boundary
- H = Mobile monitoring equipment (specify) _____
- I = Other (specify) _____

²Use the following codes to designate detection limit units:

- A = ppm
- B = Fibers/cubic centimeter (f/cc)
- C = Micrograms/cubic meter (μ/m³)

☐ Mark (X) this box if you attach a continuation sheet.

9.11 If you conduct routine medical tests for monitoring the health effects of exposure to the listed substance, specify the type and frequency of the tests.

CBI

☐

Test Description

Frequency
(weekly, monthly, yearly, etc.)

N/A

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type FLexible Slabstock Polyurethane Mfg. Process

Work area 7.9

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1989</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify)	<u></u>	<u></u>	<u></u>	<u></u>
Vessel emission controls	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify)	<u></u>	<u></u>	<u></u>	<u></u>

☒ Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Mfg. Process

Work area 7.9

<u>Equipment or Process Modification</u>	<u>Reduction in Worker Exposure Per Year (%)</u>
<u>Installed Exhaust Fan</u>	<u>N/A</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

☒ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[] Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 1

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>Y</u>
Safety goggles/glasses	<u>Y</u>
Face shields	<u>Y</u>
Coveralls	<u>N</u>
Bib aprons	<u>Y</u>
Chemical-resistant gloves	<u>Y</u>
Other (specify)	
_____	_____
_____	_____

[XX] Mark (X) this box if you attach a continuation sheet.

9.15 If workers use respirators when working with the listed substance, specify for each process type, the work areas where the respirators are used, the type of respirators used, the average usage, whether or not the respirators were fit tested, and the type and frequency of the fit tests. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process

Work Area	Respirator Type	Average Usage ¹	Fit Tested (Y/N)	Type of Fit Test ²	Frequency of Fit Tests (per year)
7.21	Organic	A	N	N/A	N/A
7.28	Organic	A	N	N/A	N/A

¹Use the following codes to designate average usage:

A = Daily
 B = Weekly
 C = Monthly
 D = Once a year
 E = Other (specify) _____

²Use the following codes to designate the type of fit test:

QL = Qualitative
 QT = Quantitative

☐ Mark (X) this box if you attach a continuation sheet.

9.16 Respirator Maintenance Program -- For each type of respirator used when working with the listed substance, specify the frequency of the maintenance activity, and the person who performs the maintenance activity. Photocopy this question and complete it separately for each respirator type.

Respirator type Organic

<u>Respirator Maintenance Activity</u>	<u>Frequency¹</u>	<u>Person Performing Activity²</u>
Cleaning	<u>N/A</u>	<u>N/A</u>
Inspection	<u>N/A</u>	<u>N/A</u>
Replacement		
Cartridge/Canister	<u>N/A</u>	<u>N/A</u>
Respirator unit	<u>N/A</u>	<u>N/A</u>

¹Use the following codes to designate the frequency of maintenance activity:

A = After each use

B = Weekly

C = Other (specify) _____

²Use the following codes to designate who performs the maintenance activity:

A = Plant industrial hygienist

B = Supervisor

C = Foreman

D = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

9.17 Respirator Training Program -- Describe your respirator training and re-training programs for each type of respirator used when working with the listed substance. Photocopy this question and complete it separately for each respirator type.

a.

Respirator type Organic

Type of Training ¹	Number of Workers Trained	Location of Training ²	Length of Training (hrs)	Person Performing Training ³	Frequency ⁴
N/A	N/A	N/A	N/A	N/A	N/A

b.

Respirator type

Type of Re-training ¹	Number of Workers Re-trained	Location of Re-Training ²	Length of Re-Training (hrs)	Person Performing Re-Training ³	Frequency ⁴

¹Use the following codes to designate the type of training or re-training:

E = Emergency
R = Routine

²Use the following codes to designate the location of training or re-training:

A = Outside plant instruction
B = In-house classroom instruction
C = On-the-job
D = Other (specify) _____

³Use the following codes to designate the person who performs the training or re-training:

A = Plant industrial hygienist
B = Supervisor
C = Foreman
D = Other (specify) _____

⁴Use the following codes to designate the frequency of respirator training or re-training:

A = Monthly
B = Fixed monthly
C = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

9.18 For each type of personal protective clothing and safety equipment used when working with the listed substance, indicate whether you have conducted a permeation test on the clothing or equipment for the listed substance.

<u>Clothing and Equipment</u>	<u>Permeation Tests Conducted (Y/N)</u>
Coveralls	No
Bib apron	No
Gloves	No
Other (specify)	
	No
	No
	No

☐ Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this question and complete it separately for each process type and work area.

CBI

☐

Process type Flexible Slabstock Polyurethane Foam Mfg. Process

Work area 1

Entrance by key to authorized employees only

9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type N/A 1

Work area

<u>Housekeeping Tasks</u>	<u>Less Than Once Per Day</u>	<u>1-2 Times Per Day</u>	<u>3-4 Times Per Day</u>	<u>More Than 4 Times Per Day</u>
Sweeping	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Vacuuming	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Water flushing of floors	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Other (specify)	<u> </u>	<u> </u>	<u> </u>	<u> </u>

1. Do not have spills

☐ Mark (X) this box if you attach a continuation sheet.

9.21 Do you have a written medical action plan for responding to routine or emergency exposure to the listed substance?

Routine exposure

Yes 1

No ②

Emergency exposure

Yes 1

No ②

If yes, where are copies of the plan maintained?

Routine exposure: _____

Emergency exposure: _____

9.22 Do you have a written leak and spill cleanup plan that addresses the listed substance? Circle the appropriate response.

Yes ①

No 2

If yes, where are copies of the plan maintained? Chemical Receiving, Foam Controls
General Office

Has this plan been coordinated with state or local government response organizations? Circle the appropriate response.

Yes 1

No ②

9.23 Who is responsible for monitoring worker safety at your facility? Circle the appropriate response.

Plant safety specialist 1

Insurance carrier 2

OSHA consultant 3

Other (specify) Each Department Supervisor ④

☐ Mark (X) this box if you attach a continuation sheet.

9.24 Who is responsible for safety and health training at your facility? Circle the appropriate response.

Plant safety specialist 1
Insurance carrier 2
OSHA consultant 3
Other (specify) Each Department Supervisor ④

9.25 Who is responsible for the medical program at your facility? Circle the appropriate response.

Plant physician 1
Consulting physician 2
Plant nurse 3
Consulting nurse 4
Other (specify) N/A 5

☐ Mark (X) this box if you attach a continuation sheet.

SECTION 10 ENVIRONMENTAL RELEASE

General Instructions:

Complete Part E (questions 10.23-10.35) for each non-routine release involving the listed substance that occurred during the reporting year. Report on all releases that are equal to or greater than the listed substance's reportable quantity value, RQ, unless the release is federally permitted as defined in 42 U.S.C. 9601, or is specifically excluded under the definition of release as defined in 40 CFR 302.3(22). Reportable quantities are codified in 40 CFR Part 302. If the listed substance is not a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and, thus, does not have an RQ, then report releases that exceed 2,270 kg. If such a substance however, is designated as a CERCLA hazardous substance, then report those releases that are equal to or greater than the RQ. The facility may have answered these questions or similar questions under the Agency's Accidental Release Information Program and may already have this information readily available. Assign a number to each release and use this number throughout this part to identify the release. Releases over more than a 24-hour period are not single releases, i.e., the release of a chemical substance equal to or greater than an RQ must be reported as a separate release for each 24-hour period the release exceeds the RQ.

For questions 10.25-10.35, answer the questions for each release identified in question 10.23. Photocopy these questions and complete them separately for each release.

PART A GENERAL INFORMATION

10.01 Where is your facility located? Circle all appropriate responses.

CBI

- ☐ Industrial area ①
- Urban area 2
- Residential area 3
- Agricultural area 4
- Rural area 5
- Adjacent to a park or a recreational area 6
- Within 1 mile of a navigable waterway 7
- Within 1 mile of a school, university, hospital, or nursing home facility 8
- Within 1 mile of a non-navigable waterway 9
- Other (specify) _____ 10

☐ Mark (X) this box if you attach a continuation sheet.

10.02 Specify the exact location of your facility (from central point where process unit is located) in terms of latitude and longitude or Universal Transverse Mercader (UTM) coordinates.

Latitude ° ' "

Longitude ° ' "

UTM coordinates Zone _____, Northing _____, Easting _____

10.03 If you monitor meteorological conditions in the vicinity of your facility, provide the following information.

N/A Average annual precipitation inches/year

Predominant wind direction

10.04 Indicate the depth to groundwater below your facility.

N/A Depth to groundwater meters

10.05 For each on-site activity listed, indicate (Y/N/NA) all routine releases of the listed substance to the environment. (Refer to the instructions for a definition of Y, N, and NA.)

CBI

<input type="checkbox"/> On-Site Activity	Environmental Release		
	Air	Water	Land
Manufacturing	N/A	N/A	N/A
Importing	N/A	N/A	N/A
Processing	Y	N	N
Otherwise used	N/A	N/A	N/A
Product or residual storage	Y	N	N
Disposal	N/A	N/A	N/A
Transport	N/A	N/A	N/A

☐ Mark (X) this box if you attach a continuation sheet.

10.06 Provide the following information for the listed substance and specify the level of precision for each item. (Refer to the instructions for further explanation and an example.)

CBI

☐ Quantity discharged to the air 6349¹ kg/yr ± %

Quantity discharged in wastewaters kg/yr ± %

Quantity managed as other waste in on-site
treatment, storage, or disposal units kg/yr ± %

Quantity managed as other waste in off-site
treatment, storage, or disposal units kg/yr ± %

1 Based on Industry Standards

☐ Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process

<u>Stream ID Code</u>	<u>Control Technology</u>	<u>Percent Efficiency</u>
<u>7V</u>	<u>To Atmosphere</u>	<u>N/A</u>
<u>7V</u>	<u>TO Atmosphere</u>	<u>N/A</u>
<u>7Y</u>	<u>To Atmosphere</u>	<u>N/A</u>
<u>7BB</u>	<u>TO Atmosphere</u>	<u>N/A</u>
<u>7CG</u>	<u>To Atmosphere</u>	<u>N/A</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

☐ Mark (X) this box if you attach a continuation sheet.

PART B RELEASE TO AIR

- 10.09 Point Source Emissions -- Identify each emission point source containing the listed substance in terms of a Stream ID Code as identified in your process block or residual treatment block flow diagram(s), and provide a description of each point source. Do not include raw material and product storage vents, or fugitive emission sources (e.g., equipment leaks). Photocopy this question and complete it separately for each process type.

CBI

☐

Process type Flexible Slabstock Polyurethane Foam Mfg. Process

Point Source
ID Code

Description of Emission Point Source

7V

Vent fans for reaction zone

7Y

Vent fans for conveyor System

7BB

Vent fans for Heater Bank

7GG

Vent fans for curing area

☐ Mark (X) this box if you attach a continuation sheet.

☐ Mark (X) this box if you attach a continuation sheet.

10.10 Emission Characteristics - - Characterize the emissions for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

<input type="checkbox"/>	Point Source ID Code	Physical State ¹	Average Emissions (kg/day)	Frequency ² (days/yr)	Duration ³ (min/day)	Average Emission Factor ⁴	Maximum Emission Rate (kg/min)	Maximum Emission Rate Frequency (events/yr)	Maximum Emission Rate Duration (min/event)
	7V	V	3.48	254	90	.37%	N/A	N/A	N/A
	7V	V	3.48	254	90	.37%	N/A	N/A	N/A
	7V	V	3.48	254	90	.37%	N/A	N/A	N/A
	7BB	V	3.48	254	90	.37%	N/A	N/A	N/A
	7GG	V	3.48	254	90	.37%	N/A	N/A	N/A

¹Use the following codes to designate physical state at the point of release:

G = Gas; V = Vapor; P = Particulate; A = Aerosol; O = Other (specify) _____

²Frequency of emission at any level of emission

³Duration of emission at any level of emission

⁴Average Emission Factor — Provide estimated (\pm 25 percent) emission factor (kg of emission per kg of production of listed substance)

10.11 Stack Parameters -- Identify the stack parameters for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

☐

Point Source ID Code	Stack Height(m)	Stack Inner Diameter (at outlet) (m)	Exhaust Temperature (°C)	Emission Exit Velocity (m/sec)	Building Height(m) ¹	Building, Width(m) ²	Vent, Type ³
7.20	4.88	.61	N/A	10.0	4.57	N/A	V
7.23	4.57	.61	N/A	11.5	4.57	N/A	V
7.23	3.35	.61	N/A	15.5	4.57	N/A	V
7.24	5.79	.61	N/A	15.5	4.57	N/A	V
7.27	4.57	.61	N/A	15.2	4.57	N/A	V
7.27	4.26	.61	N/A	17.5	4.57	N/A	V
7.30	N/A	1.22	N/A	15.0	4.57	N/A	H
7.30	N/A	1.22	N/A	16.5	4.57	N/A	H
7.30	.61	.91	N/A	14.5	5.03	N/A	V
7.30	.61	.91	N/A	14.5	5.03	N/A	V

¹Height of attached or adjacent building

²Width of attached or adjacent building

³Use the following codes to designate vent type:

H = Horizontal

V = Vertical

☐ Mark (X) this box if you attach a continuation sheet.

10.12 If the listed substance is emitted in particulate form, indicate the particle size distribution for each Point Source ID Code identified in question 10.09. Photocopy this question and complete it separately for each emission point source.

CBI

N/A

☐

Point source ID code

Size Range (microns)

Mass Fraction (% ± % precision)

< 1

≥ 1 to < 10

≥ 10 to < 30

≥ 30 to < 50

≥ 50 to < 100

≥ 100 to < 500

≥ 500

Total = 100%

☐ Mark (X) this box if you attach a continuation sheet.

PART C FUGITIVE EMISSIONS

10.13 Equipment Leaks -- Complete the following table by providing the number of equipment types listed which are exposed to the listed substance and which are in service according to the specified weight percent of the listed substance passing through the component. Do this for each process type identified in your process block or residual treatment block flow diagram(s). Do not include equipment types that are not exposed to the listed substance. If this is a batch or intermittently operated process, give an overall percentage of time per year that the process type is exposed to the listed substance. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process
 Percentage of time per year that the listed substance is exposed to this process type 100 %

Equipment Type	Number of Components in Service by Weight Percent of Listed Substance in Process Stream					Greater than 99%
	Less than 5%	5-10%	11-25%	26-75%	76-99%	
Pump seals ¹						
Packed						0
Lip Seal						1
Mechanical						
Double mechanical ²						0
Compressor seals ¹						0
Flanges	5					12
Valves						
Gas ³						0
Liquid	8					21
Pressure relief devices ⁴ (Gas or vapor only)						1
Sample connections						
Gas						0
Liquid						0
Open-ended lines ⁵ (e.g., purge, vent)						
Gas						0
Liquid						0

¹List the number of pump and compressor seals, rather than the number of pumps or compressors

10.13 continued on next page

☐ Mark (X) this box if you attach a continuation sheet.

10.13 (continued)

²If double mechanical seals are operated with the barrier (B) fluid at a pressure greater than the pump stuffing box pressure and/or equipped with a sensor (S) that will detect failure of the seal system, the barrier fluid system, or both, indicate with a "B" and/or an "S", respectively

³Conditions existing in the valve during normal operation

⁴Report all pressure relief devices in service, including those equipped with control devices

⁵Lines closed during normal operation that would be used during maintenance operations

N/A 10.14 Pressure Relief Devices with Controls -- Complete the following table for those pressure relief devices identified in 10.13 to indicate which pressure relief devices in service are controlled. If a pressure relief device is not controlled, enter "None" under column c.

[]

[illegible]

¹Refer to the table in question 10.13 and record the percent range given under the heading entitled "Number of Components in Service by Weight Percent of Listed Substance" (e.g., <5%, 5-10%, 11-25%, etc.)

²The EPA assigns a control efficiency of 100 percent for equipment leaks controlled with rupture discs under normal operating conditions. The EPA assigns a control efficiency of 98 percent for emissions routed to a flare under normal operating conditions

☐ Mark (X) this box if you attach a continuation sheet.

10.15 Equipment Leak Detection -- If a formal leak detection and repair program is in place, complete the following table regarding those leak detection and repair procedures. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type

Equipment Type	Leak Detection	Detection Device ¹	Frequency of Leak Detection (per year)	Repairs Initiated (days after detection)	Repairs Completed (days after initiated)
	Concentration (ppm or mg/m ³) Measured at _____ Inches from Source				
Pump seals					
Packed	_____	_____	_____	_____	_____
Mechanical	_____	_____	_____	_____	_____
Double mechanical	_____	_____	_____	_____	_____
Compressor seals	_____	_____	_____	_____	_____
Flanges	_____	_____	_____	_____	_____
Valves					
Gas	_____	_____	_____	_____	_____
Liquid	_____	_____	_____	_____	_____
Pressure relief devices (gas or vapor only)	_____	_____	_____	_____	_____
Sample connections					
Gas	_____	_____	_____	_____	_____
Liquid	_____	_____	_____	_____	_____
Open-ended lines					
Gas	_____	_____	_____	_____	_____
Liquid	_____	_____	_____	_____	_____

¹Use the following codes to designate detection device:

POVA = Portable organic vapor analyzer

FPM = Fixed point monitoring

0 = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

☐ Mark (X) this box if you attach a continuation sheet.

- 10.16 Raw Material, Intermediate and Product Storage Emissions - - Complete the following table by providing the information on each liquid raw material, intermediate, and product storage vessel containing the listed substance as identified in your process block or residual treatment block flow diagram(s).

CBI

☐

Vessel Type ¹	Floating Roof Seals ²	Composition of Stored Materials ³	Throughput (liters per year)	Vessel Filling Rate (gpm)	Vessel Filling Duration (min)	Vessel Inner Diameter (m)	Vessel Height (m)	Vessel Volume (l)	Operating Vessel Emission Controls ⁴	Design Flow Rate ⁵	Vent Diameter (cm)	Control Efficiency (%)	Basis for Estimate ⁶
									N/A				
F	N/A	Liquid	1,428,816	75	312	3.05	3.96	883,456	N/A	10.16	UK	UK	
						X 7.32							

¹Use the following codes to designate vessel type:

F = Fixed roof
 CIF = Contact internal floating roof
 NCIF = Noncontact internal floating roof
 EFR = External floating roof
 P = Pressure vessel (indicate pressure rating)
 H = Horizontal
 U = Underground

²Use the following codes to designate floating roof seals:

MS1 = Mechanical shoe, primary
 MS2 = Shoe-mounted secondary
 MS2R = Rim-mounted, secondary
 LM1 = Liquid-mounted resilient filled seal, primary
 LM2 = Rim-mounted shield
 LMW = Weather shield
 VM1 = Vapor mounted resilient filled seal, primary
 VM2 = Rim-mounted secondary
 VMW = Weather shield

³Indicate weight percent of the listed substance. Include the total volatile organic content in parenthesis

⁴Other than floating roofs

⁵Gas/vapor flow rate the emission control device was designed to handle (specify flow rate units)

⁶Use the following codes to designate basis for estimate of control efficiency:

C = Calculations
 S = Sampling

PART E NON-ROUTINE RELEASES

10.23 Indicate the date and time when the release occurred and when the release ceased or was stopped. If there were more than six releases, attach a continuation sheet and list all releases.

<u>Release</u>	<u>Date Started</u>	<u>Time (am/pm)</u>	<u>Date Stopped</u>	<u>Time (am/pm)</u>
<u>1</u>	<u>None</u>	<u> </u>	<u> </u>	<u> </u>
<u>2</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>3</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>4</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>5</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>6</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

10.24 Specify the weather conditions at the time of each release.

<u>N/A</u>	<u>Wind Speed (km/hr)</u>	<u>Wind Direction</u>	<u>Humidity (%)</u>	<u>Temperature (°C)</u>	<u>Precipitation (Y/N)</u>
<u>Release</u>					
<u>1</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>2</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>3</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>4</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>5</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>6</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

☐ Mark (X) this box if you attach a continuation sheet.

APPENDIX I: List of Continuation Sheets

Attach continuation sheets for sections of this form and optional information after this page. In column 1, clearly identify the continuation sheet by listing the question number to which it relates. In column 2, enter the inclusive page numbers of the continuation sheet for each question number.

Question Number (1)	Continuation Sheet Page Numbers (2)
4.02	5
7.01	1
7.03	1
7.04	4
7.06	1
8.01	1
8.05	1
8.06	1
9.04	1
9.05	1
9.12	9
9.13	4
9.14	11

☐ Mark (X) this box if you attach a continuation sheet.

- isocyanate -
4/28/89

MATERIAL SAFETY DATA SHEET

2290

ICI Polyurethanes Group

West Deptford, New Jersey 08066

Phone, 24 hours: (302) 575-3000

Medical inquiries: (800) 327-8633

07080R

Rev.: F

Date: 02/06/89

SECTION 1 NAME & HAZARD SUMMARY

Material name: RUBINATE TDI

Hazard summary (as defined by OSHA Hazard Comm. Std., 29 CFR 1910.1200):

Physical hazards: Unstable.

Health hazards: Corrosive (eye), irritant (skin, respiratory passages, skin sensitizer), inhalation (TLV), harmful pulmonary (lung) sensitizer.

Based on TDI - harmful (respiratory sensitizer, lung injury).

Read the entire MSDS for a more thorough evaluation of the hazards.

SECTION 2 INGREDIENTS	%	TLV (ACGIH)
Toluene diisocyanate, 2,4-isomer (CAS 584-84-9)	80	0.005 ppm
Toluene diisocyanate, 2,6-isomer (CAS 91-08-7)	20	Not listed

Ingredients not precisely identified are proprietary or nonhazardous.
Values are not product specifications.

SECTION 3 PHYSICAL DATA

Appearance and odor: Clear, colorless liquid with sharp odor

Boiling point: 484°F, 251.1°C

Vapor pressure (mm Hg at 20°C): 0.02

Vapor density (air = 1): 6.0

Solubility in water: Reacts

pH: No data

Specific gravity: 1.22

% Volatile by volume: No data

SECTION 4 FIRE AND EXPLOSION HAZARD DATA

Flash point: 270°F, 132°C (OC)

Autoignition temperature: No data

Flammable limits (STP): 0.9-9.5%

Extinguishing media:

Dry chemical, foam, carbon dioxide, halogenated agents. If water is used, use very large quantities. The reaction between water and hot isocyanate may be vigorous.

Special fire fighting protective equipment:

Self-contained breathing apparatus with full facepiece and protective clothing.

SECTION 4 FIRE AND EXPLOSION HAZARD DATA (continued)

Unusual fire and explosion hazards:

Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture them.

SECTION 5 REACTIVITY DATA

Stability:

Stable under normal conditions.

Incompatibility:

This product will react with any materials containing active hydrogens, such as water, alcohol, ammonia, amines, alkalies and acids. The reaction with water is very slow under 50°C, but is accelerated at higher temperatures and in the presence of alkalies, tertiary amines, and metal compounds. Some reactions can be violent.

Hazardous decomposition products:

Combustion products: Carbon dioxide, carbon monoxide. Nitrogen oxides, ammonia. Trace amounts of hydrogen cyanide.

Hazardous polymerization:

May occur. High temperatures in the presence of alkalies, tertiary amines, and metal compounds will accelerate polymerization. Possible evolution of carbon dioxide gas may rupture closed containers.

SECTION 6 HEALTH HAZARD ASSESSMENT

General:

The health hazard assessment is based on an evaluation of the chemical composition together with information from a search of the scientific literature and other commercial sources.

Ingestion:

The acute oral LD50 in rat is reported to be 5,800 mg/kg. Relative to other materials, this material is classified as "practically nontoxic" by ingestion. In humans, irritation or chemical burns of the mouth, pharynx, esophagus and stomach can develop following ingestion. Injury may be severe and cause death.

Eye contact:

This material is reported to induce chemical burns in rabbit eye studies; a similar degree of eye injury may develop after contact with human eyes.

Skin contact:

This material is reported to be severely irritating in rabbit dermal irritation studies and will probably irritate human skin. Skin sensitization and irritation may develop after repeated and/or prolonged contact with human skin.

Skin absorption:

The acute dermal LD50 in rabbit is reported to be above 16 g/kg. Systemically toxic concentrations of this product will probably not be absorbed through human skin.

SECTION 6 HEALTH HAZARD ASSESSMENT (continued)

Inhalation:

Vapors and aerosols can irritate eyes, nose and respiratory passages. TDI vapors are easily generated and are lethal to rats via inhalation at concentrations below 10 ppm. A no effect level for rats of about 0.1 ppm was determined from a subacute study. This and other data indicate the vapors and aerosols of TDI are highly toxic relative to the vapors of other compounds. Vapors and aerosols of TDI strongly irritate the upper and lower respiratory tract. Human experience indicates that TDI will induce an asthma-like respiratory sensitization in some individuals. If applications which involve spraying (e.g. aerosols and mists) or if elevated temperatures are used, even higher vapor concentrations may result and introduce a greater degree of risk of inhalation injury. Rat and mouse toxicity and carcinogenicity studies were conducted with two years of inhalation exposure to vapors of TDI at concentrations of 0.05 and 0.15 ppm. No indication of carcinogenic effect was observed. However, mice exposed to 0.15 ppm for two years showed reduced weight gain and signs of irritation in the upper and lower respiratory tract. No other effect of toxicological significance was observed.

Other effects of overexposure:

There are two studies which allege that workers exposed to TDI at or near the current TLV have experienced impaired ventilatory capacities. These findings have not been independently substantiated. The National Toxicology Program (NTP) 4th Annual Report on Carcinogens (1985) lists TDI as a substance that may reasonably be anticipated to be a carcinogen based on a NTP Technical Report. In the cited study, laboratory animals gavaged TDI in corn oil developed cancer. In our view, the inhalation study is of more potential biological relevance to man.

First aid procedures:

Skin: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.

Ingestion: Do not induce vomiting. Give 1 or 2 glasses of water to drink and refer person to medical personnel. (Never give anything by mouth to an unconscious person.)

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel.

Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage following ingestion.

SECTION 7 SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled:

Wear skin, eye, and respiratory protection during cleanup. Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Prepare a decontamination solution of 0.2-5% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for the ammonium hydroxide). Follow the precautions on the supplier's material safety data sheets. All operations should be performed by trained personnel familiar with the hazards of the chemicals used. Treat the spill area with the decontamination solution, using about 10 parts of solution for each part of the spill, and allow it to react for at least 10 minutes. Carbon dioxide will be evolved, leaving insoluble polyureas. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

Disposal method:

Slowly stir the isocyanate waste into the decontamination solution described above using 10 parts of the solution for each part of the isocyanate. Let stand for 48 hours, allowing the evolved carbon dioxide to vent away. Neutralize the waste. Neither the solid nor the liquid portion is a hazardous waste under RCRA, 40 CFR 261.

Container disposal:

Drums must be decontaminated in properly ventilated areas by personnel protected from the inhalation of isocyanate vapors. Spray or pour 5-15 liters of decontaminating solution into the drum, making sure the walls are well rinsed. Leave the drum soaking unsealed for 48 hours. Pour out the decontaminating solution and triple rinse the empty container. Puncture or otherwise destroy the rinsed container before disposal.

SECTION 8 SPECIAL PROTECTION INFORMATION

TLV® or suggested control value:

The ACGIH TLV, OSHA PEL, and NIOSH recommendation for TDI is 0.005 ppm 8-hour TWA, 0.02 ppm STEL.

Ventilation:

If needed, use local exhaust ventilation to keep airborne concentrations below the TLV. Follow guidelines in the ACGIH publication "Industrial Ventilation". Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

Respiratory protection:

Because of the low vapor pressure, ventilation is usually sufficient to keep vapors below the TLV at room temperatures. Exceptions are when the material is sprayed or heated. If airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved positive pressure supplied air respirator with a full facepiece or an air supplied hood. For emergencies, use a positive pressure self-contained breathing apparatus. Air purifying (cartridge type) respirators are not approved for protection against isocyanates.

SECTION 8 SPECIAL PROTECTION INFORMATION (continued)

Protective clothing:

Gloves determined to be impervious under the conditions of use. Depending on conditions of use, additional protection may be required such as apron, arm covers, or full body suit. Wash contaminated clothing before rewearing. The literature indicates that clothing constructed of butyl rubber, Viton, Silver Shield, Saranex coated Tyvek, as well as some nitrile rubber and polyvinyl alcohol (PVA) coated garments have excellent resistance to permeation by TDI. Clothing constructed of Teflon, as well as some garments constructed of nitrile rubber, natural rubber and PVA exhibited limited resistance to permeation by TDI. Some clothing constructed of natural rubber or polyethylene exhibited little resistance to permeation by TDI. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.

Eye protection:

Chemical tight goggles and full faceshield.

Other protective equipment:

Eyewash station and safety shower in work area.

SECTION 9 SPECIAL PRECAUTIONS OR OTHER COMMENTS

Special precautions or other comments:

Prevent skin and eye contact. Observe TLV limitations. Avoid breathing vapors or aerosols. Workers should shower and change to fresh clothing after each shift. A sensitized individual should not be exposed to the product which caused the sensitization. Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool area. Individuals with existing respiratory disease such as chronic bronchitis, emphysema or asthma should not be exposed to isocyanates. These individuals should be identified through baseline and annual evaluation and removed from further exposure. Medical examination should include medical history, vital capacity, and forced expiratory volume at one second.

SECTION 10 REGULATORY INFORMATION

TSCA (Toxic Substances Control Act) Regulations, 40 CFR 710:

All ingredients are on the TSCA Section 8(b) Inventory.

CERCLA and SARA Regulations (40 CFR 355, 370, and 372):

Section 313 Supplier Notification. This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372: 100% TDI (CAS 584-84-9 and 91-08-7).

State Regulations:

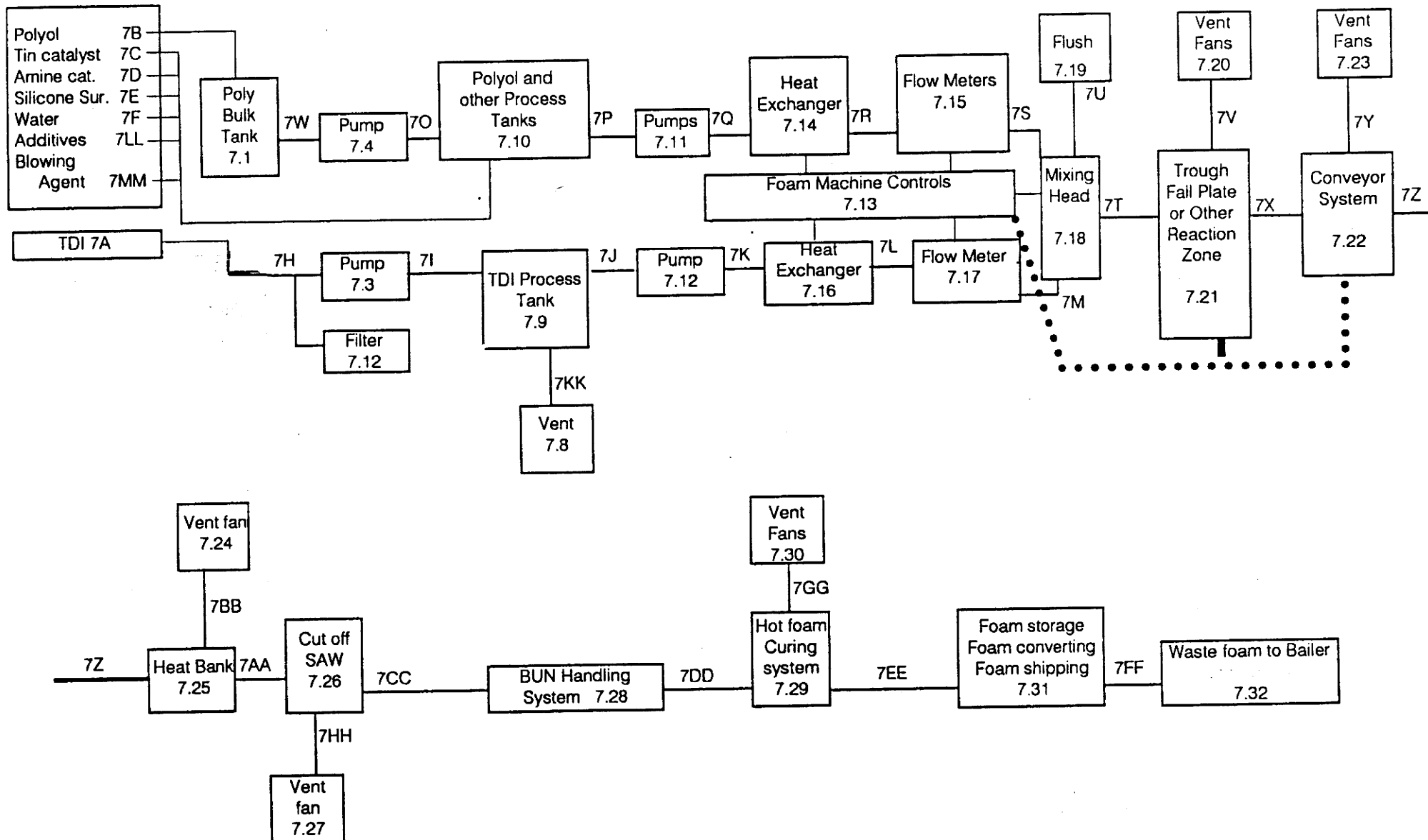
California Proposition 65: No warnings are necessary.

The information herein is given in good faith
but no warranty, expressed or implied, is made.

7.01 PROCESSOR

Process Type: Flexible Slabstock Polyurethane Foam Manufacturing Process

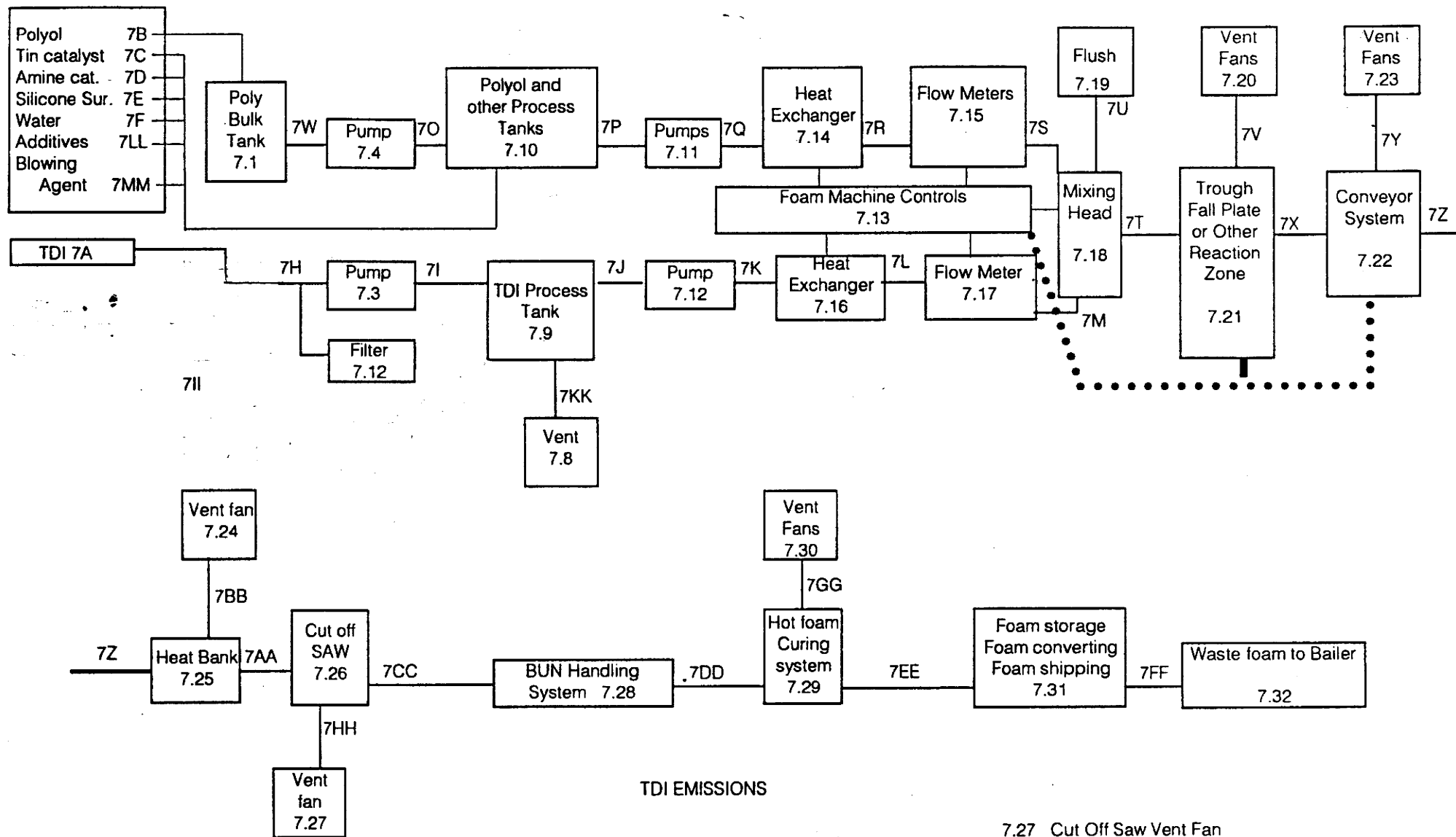
Intermediates: None



7.03 EMISSIONS

Process Type: Flexible Slabstock Polyurethane Foam Manufacturing Process

Intermediates: None



TDI EMISSIONS

- 7.8 Process Tank Vent
- 7.3, 7.12 TDI Pump Seals
- 7.20 Reaction Zone Vent Fans
- 7.23 Conveyor System Vent Fans
- 7.24 Heat Bank Vent Fan

- 7.27 Cut Off Saw Vent Fan
- 7.30 Curing Area Vent Fans

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Man. Process

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.10LL</u>	<u>Additives Tank</u>	<u>Ambient</u>	<u>1020</u>	<u>Steel, Glass</u>
<u>7.10MM</u>	<u>Blowing Agent Tank</u>	<u>18</u>	<u>Atmospheric</u>	<u>Steel Lined</u>
<u>7.11B</u>	<u>Polyol Pump</u>	<u>Ambient</u>	<u>4100</u>	<u>Steel</u>
<u>7.11C</u>	<u>TinCatalyst Pump</u>	<u>Ambient</u>	<u>4100</u>	<u>Steel</u>
<u>7.11D</u>	<u>Armine Cat. Pump</u>	<u>Ambient</u>	<u>4100</u>	<u>Steel</u>
<u>7.11E</u>	<u>Silicone Sur. Pump</u>	<u>Ambient</u>	<u>4100</u>	<u>Steel</u>
<u>7.11F</u>	<u>Water Pump</u>	<u>Ambient</u>	<u>4100</u>	<u>Steel</u>
<u>7.11LL</u>	<u>Additives Pump</u>	<u>Ambient</u>	<u>4100</u>	<u>Steel</u>
<u>7.11MM</u>	<u>Blowing Agent Pump</u>	<u>Ambient</u>	<u>1550</u>	<u>Steel</u>
<u>7.12</u>	<u>T.D.I. Pump</u>	<u>418</u>	<u>52000</u>	<u>Steel</u>

☐ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Man. Process

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.13</u>	<u>Foam Machine Controls</u>	<u>Ambient</u>	<u>N/A</u>	<u>N/A</u>
<u>7.15F</u>	<u>Flow Meter Water</u>	<u>Ambient</u>	<u>1040</u>	<u>High Pressure Glas</u>
<u>7.15MM</u>	<u>Flow Meter Blowing Agent</u>	<u>21</u>	<u>1560</u>	<u>High Pressure Glas</u>
<u>7.14</u>	<u>Plate Heat Exchanger</u>	<u><16</u>	<u>3100</u>	<u>Stainless</u>
<u>7.16</u>	<u>Plate Heat Exchanger</u>	<u>18</u>	<u>1040</u>	<u>Stainless</u>
<u>7.17</u>	<u>T.D.I. Flow Meter</u>	<u>18</u>	<u>1040</u>	<u>High PResure Glas</u>
<u>7.18</u>	<u>Mixing Head</u>	<u><21</u>	<u>780</u>	<u>Steel</u>
<u>7.19</u>	<u>Flush</u>	<u>Ambient</u>	<u>1040</u>	<u>Steel, Glass lined</u>
<u>7.20</u>	<u>Vent Fans</u>	<u>Ambient</u>	<u>N/A</u>	<u>Steel</u>
<u>7.21</u>	<u>Trough, Fall Plates & Reaction Zone</u>	<u><100</u>	<u>Atmospheric</u>	<u>Steel</u>

☐ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Man. Process

<u>Unit Operation ID Number</u>	<u>Typical Equipment Type</u>	<u>Operating Temperature Range (°C)</u>	<u>Operating Pressure Range (mm Hg)</u>	<u>Vessel Composition</u>
<u>7.22</u>	<u>Conveyor System</u>	<u><100</u>	<u>Atmospheric</u>	<u>Steel</u>
<u>7.23</u>	<u>Vent Fans</u>	<u>Ambient</u>	<u>N/A</u>	<u>Steel</u>
<u>7.24</u>	<u>Vent Fan</u>	<u>Ambient</u>	<u>N/A</u>	<u>Steel</u>
<u>7.25</u>	<u>Heat Bank</u>	<u><100</u>	<u>Atmospheric</u>	<u>N/A</u>
<u>7.26</u>	<u>Cut Off Saw</u>	<u><100</u>	<u>N/A</u>	<u>Stainless</u>
<u>7.27</u>	<u>Vent Fan</u>	<u>Ambient</u>	<u>N/A</u>	<u>Steel</u>
<u>7.28</u>	<u>Bun Handling</u>	<u>Ambient</u>	<u>Atmospheric</u>	<u>Concrete, Steel</u>
<u>7.29</u>	<u>Hot Foam Curing</u>	<u>Ambient</u>	<u>Atmospheric</u>	<u>Concrete, Steel</u>
<u>7.30</u>	<u>Vent Fans</u>	<u>AMbient</u>	<u>N/A</u>	<u>Steel</u>
<u>7.31</u>	<u>Foam Storage, Convert. & Shipping</u>	<u>Ambient</u>	<u>Atmospheric</u>	<u>Concrete, Steel</u>

☐ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Man. Process

<u>Unit Operation ID Number</u>	<u>Typical Equipment Type</u>	<u>Operating Temperature Range (°C)</u>	<u>Operating Pressure Range (mm Hg)</u>	<u>Vessel Composition</u>
<u>7.32</u>	<u>Bailer</u>	<u>Ambient</u>	<u>N/A</u>	<u>Steel</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
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☐ Mark (X) this box if you attach a continuation sheet.

[] Process type Flexible Slabstock Polyurethane Foam MFG. Process

☐ Process type Flexible Slabstock Polyurethane Foam MFG. Process

[illegible]

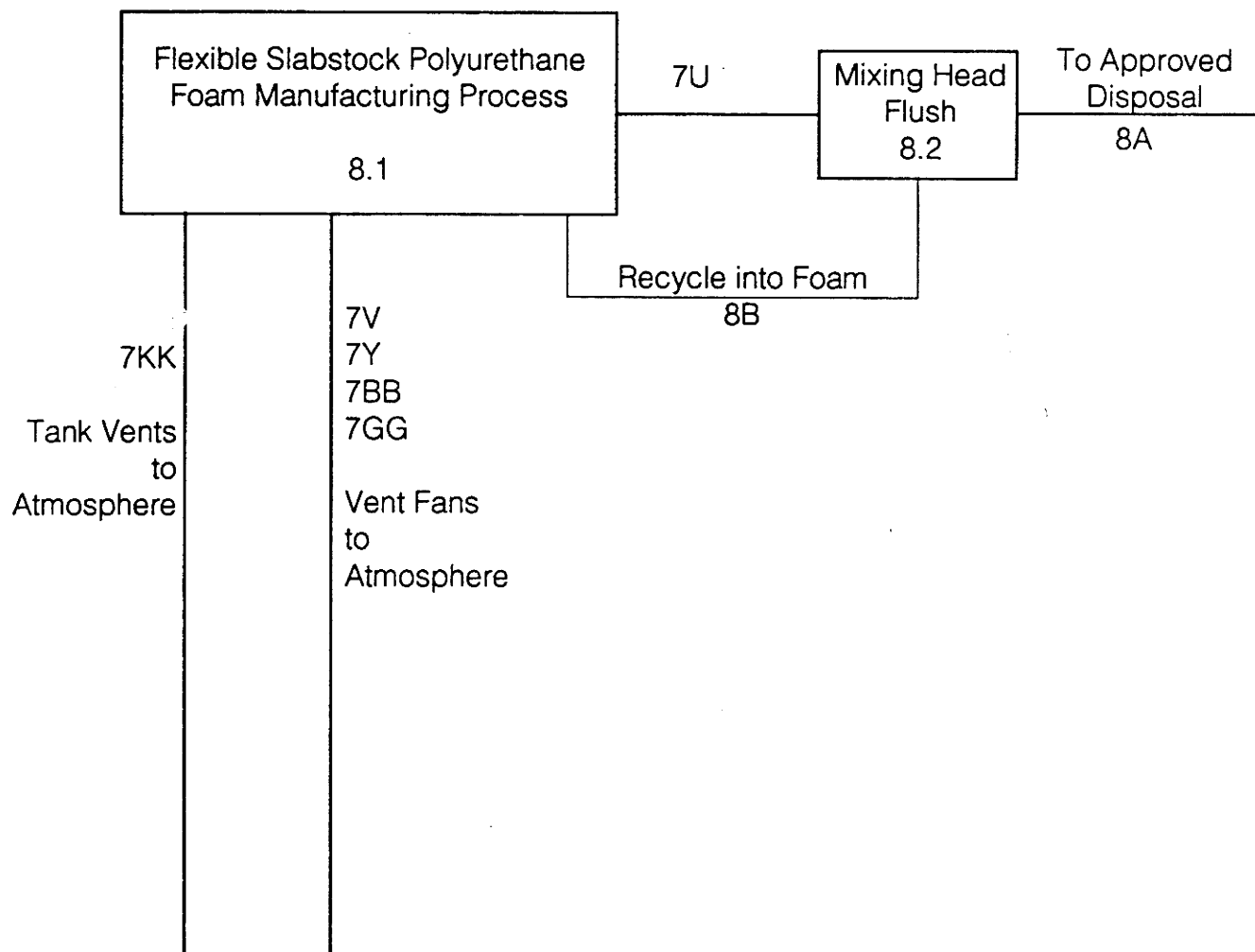
7.06 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.01

1

PROCESS TYPE: Flexible Slabstock Polyurethane Foam Manufacturing Process



PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI ☐ Process type Flexible Polyurethane Foam Mfg. Process

a.	b.	c.	d.	e.	f.	g.
Stream ID Code	Type of Hazardous Waste ¹	Physical State of Residual ²	Known Compounds ³	Concentrations (% or ppm) ^{4,5,6}	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7GG</u>	<u>N/A</u>	<u>Cu</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>8A</u>	<u>N/A</u>	<u>SO</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>8B</u>	<u>N/A</u>	<u>OL</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

8.05 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process

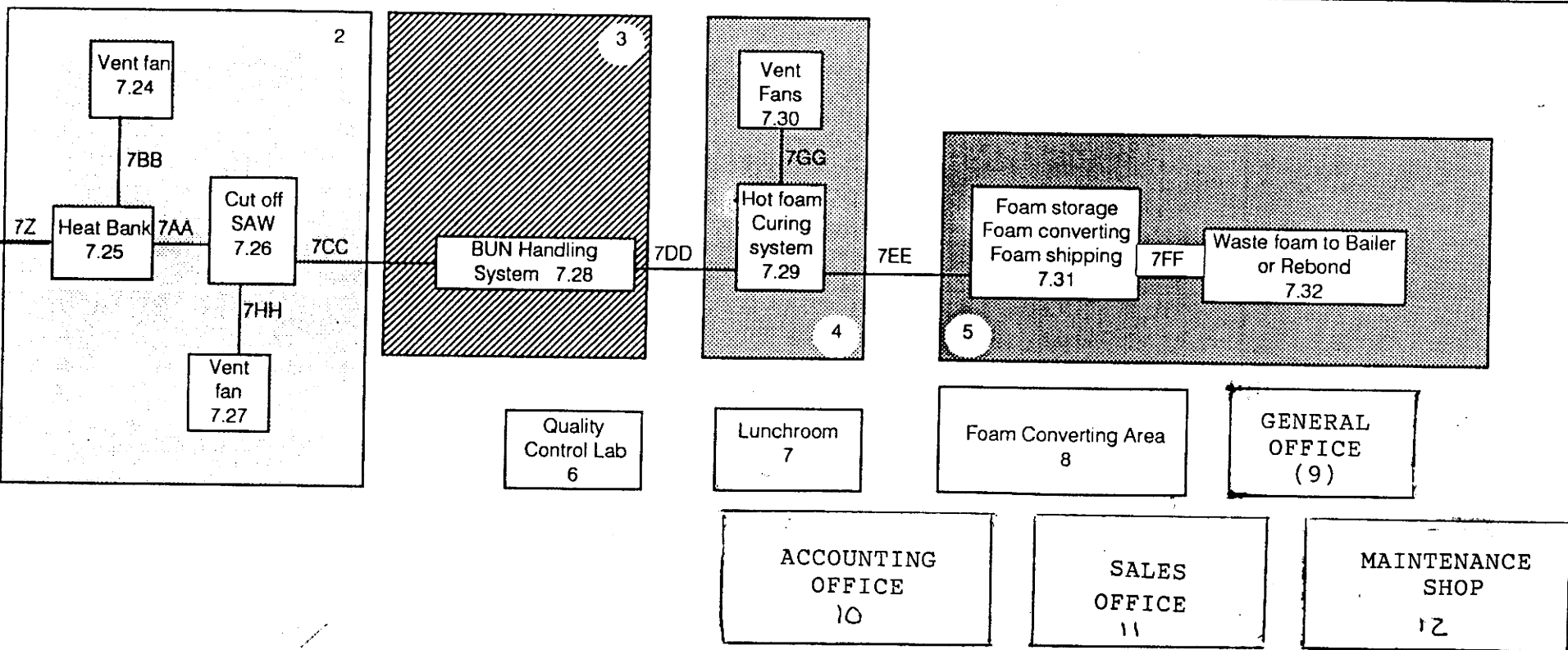
a.	b.	c.	d.	e.	f.	g.
Stream ID Code	Waste Description Code	Management Method Code	Residual Quantities (kg/yr)	Management of Residual (%) On-Site Off-Site	Costs for Off-Site Management (per kg)	Changes in Management Methods
<u>7GG</u>	<u>B57</u>	<u>M-5</u>	<u>N/A</u>	<u>N/A</u>		<u>N/A</u>
<u>8A</u>	<u>B82</u>	<u>5S</u>	<u>N/A</u>	<u>N/A</u>		<u>N/A</u>
<u>8B</u>	<u>B57</u>	<u>8SR</u>	<u>N/A</u>	<u>N/A</u>		<u>N/A</u>

¹Use the codes provided in Exhibit 8-1 to designate the waste descriptions

²Use the codes provided in Exhibit 8-2 to designate the management methods

☐ Mark (X) this box if you attach a continuation sheet.

Intermediates: None



9.05 Describe the various work area(s) shown in question 9.04 that encompass workers who may potentially come in contact with or be exposed to the listed substance. Add any additional areas not shown in the process block flow diagram in question 7.01 or 7.02. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process

Work Area ID

Description of Work Areas and Worker Activities

1	T.D.I. Tank	Receive chemicals
X2	T.D.I. Pump	Receive chemicals
3	T.D.I. Filter	Receive chemicals
4	Flow Meter 7.17	Control Flow Rate
5	Foam Machine Controls	Set Pump speeds
6	Mixing Head	Set controls
7	Flush	Operate controls to clean system
8	Reaction Zone 7.21	Operate "RS" System
9	Conveyor System 7.22	Observe foam reactions
10 XX	Cut Off Saw	Cut slabstock to length

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type FLexible Slabstock Polyurethane Mfg. Process

Work area 7.20

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1985</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify)	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>				
Vessel emission controls	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify)	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>				

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type FLexible Slabstock Polyurethane Mfg. Process

Work area 7. 23

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1985</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>
Vessel emission controls	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Mfg. Process

Work area 7.24

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1985</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify)	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>				
Vessel emission controls	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify)	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>				

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type FLexible Slabstock Polyurethane Mfg. Process

Work area 7.27

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1986</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>
Vessel emission controls	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type FLexible Slabstock Polyurethane Mfg. Process

Work area 6

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1988</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>
Vessel emission controls	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type FLexible Slabstock Polyurethane Mfg. Process

Work area 8

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1985</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>
Vessel emission controls	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type FLexible Slabstock Polyurethane Mfg. Process

Work area 7.28

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1985</u>	<u>N</u>	<u>N/A</u>
General dilution	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>
Vessel emission controls	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Mechanical loading or packaging equipment	<u>N</u>	<u></u>	<u>N</u>	<u>N/A</u>
Other (specify) <u></u>	<u></u>	<u></u>	<u></u>	<u></u>

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type ~~Flexible Slabstock Polyurethane Foam Mfg. Process~~

Work area 7.22

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:	N/A			
Local exhaust	_____	_____	_____	_____
General dilution	_____	_____	_____	_____
Other (specify)				
_____	_____	_____	_____	_____
Vessel emission controls	_____	_____	_____	_____
Mechanical loading or packaging equipment	_____	_____	_____	_____
Other (specify)				
Enclosed Conveyor	<u>7.22</u>	<u>1986</u>	<u>N</u>	<u>N/A</u>

☐ Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type ~~Flexible Slabstock Polyurethane Foam Mfg. Process~~

Work area 7.26

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
N/A				
Local exhaust	_____	_____	_____	_____
General dilution	_____	_____	_____	_____
Other (specify)				
_____	_____	_____	_____	_____
Vessel emission controls	_____	_____	_____	_____
Mechanical loading or packaging equipment	_____	_____	_____	_____
Other (specify)				
Enclosed Sut Off Saw	_____	1986	N	N/A

☐ Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Mfg. Process

Work area 7.27

<u>Equipment or Process Modification</u>	<u>Reduction in Worker Exposure Per Year (%)</u>
<u>Installed Exhaust Fan</u>	

☐ Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Mfg. Process

Work area 7.28

<u>Equipment or Process Modification</u>	<u>Reduction in Worker Exposure Per Year (%)</u>
<u>Installed Exhaust Fan</u>	

☐ Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Mfg. Process

Work area 7.22

<u>Equipment or Process Modification</u>	<u>Reduction in Worker Exposure Per Year (%)</u>
<u>Enclosed Conveyor System</u>	

☐ Mark (X) this box if you attach a continuation sheet.

CBI

Work area 7.26

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[] Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 2C

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>Y</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

[] Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process

Work area 3

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>Y</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 4

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>Y</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process

Work area 5

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>N</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process

Work area 6

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>Y</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 7

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>N</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 8

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>N</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 9

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>N</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 10

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>N</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[] Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 11

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>N</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

[] Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐ Process type Flexible Slabstock Polyurethane Foam Mfg. Process
Work area 12

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	<u>N</u>
Safety goggles/glasses	<u>N</u>
Face shields	<u>N</u>
Coveralls	<u>N</u>
Bib aprons	<u>N</u>
Chemical-resistant gloves	<u>N</u>
Other (specify)	
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.
